

The Family Process Model: Predicting Youth Behavior Problems in  
Mexican American, African American, and European American Families

Rita Gabriela Barajas

Submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy  
under the Executive Committee of the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2011

© 2011  
Rita Gabriela Barajas  
All Rights Reserved

## ABSTRACT

### The Family Process Model: Predicting Youth Behavior Problems in Mexican American, African American, and European American Families

Rita Gabriela Barajas

Research in developmental psychology suggests that economic hardship affects youth indirectly via its negative impact on several family processes. Specifically, parents' mental well-being, family relations, and ultimately parenting, can be adversely affected by the strain of economic hardship and can lead to deleterious consequences on adolescent well-being. While considerable progress has been made in documenting whether these processes account for the adverse effects of economic hardship on family functioning in European American and African American families, less is known about the processes mediating the effects of economic hardship on Latino families. The lack of research on the applicability of the family process model to Latino families is surprising as Latinos are disproportionately affected by economic disadvantage.

This study addresses these limitations in the literature by examining the applicability of the family process model to a large sample of Mexican heritage youth and families. Specifically, path models were used to test whether the family process model (where low income-to-needs ratio is negatively associated with maternal mental well-being and more family conflict, which are in turn associated with less warmth and more aggressive parenting, and ultimately child internalizing and externalizing behaviors) fit equally well across Mexican American, African

American, and European American families. In addition, a test of the direct influence of family conflict on youth internalizing and externalizing behaviors was conducted. Further, this study examined whether lack of social support from families, lack of social support from friends, fear for safety, and discrimination helped explain the association between income and family conflict. Finally, this study considered whether neighborhood concentrated poverty, immigrant concentration, and residential stability helped explain the association between income-to-needs ratio and maternal mental stress. These questions were answered using data from 2,025 participants in the Project in Human Development in Chicago Neighborhoods (PHDCN). Specifically, information from 787 Mexican American, 881 African American, and 357 European American mothers and their children informed the findings of this study. The family process model fit equally well across first generation Mexican American, second generation Mexican American, African American, and European American households. Further, there was a positive direct association between family conflict and child internalizing and externalizing behaviors across all groups. Lack of social support from families, lack of social support from friends, fear for safety, and discrimination helped explain the association between income and family conflict across all groups. Inclusion of neighborhood characteristics did not fit the data well. We were thus unable to test whether neighborhood concentrated poverty, immigrant concentration, and residential stability helped explain the association between income-to-needs ratio and maternal mental stress.

## TABLE OF CONTENTS

Introduction.....	1
Research Questions.....	5
Overview of Empirical Research.....	6
Importance of generational status in studies of Mexican Americans .....	7
Adult health outcomes .....	8
Parent-child dynamics.....	17
Studies of families enduring income loss and poverty .....	18
Testing the proposed pathways in the family stress model.....	20
Generalizability of the family stress model .....	23
Parenting and youth outcomes among ethnically diverse families .....	26
Family conflict and child internalizing and externalizing symptoms .....	32
Social stressors: perceived social support, perceived discrimination and fear for safety .....	36
Neighborhood characteristics.....	43
Method .....	50
Design and sample .....	50
Measures .....	51
Analytic strategy .....	57
Results.....	61
Discussion .....	67
Tables.....	73
Figures.....	95
References.....	102

## LIST OF TABLES AND FIGURES

Table 1.	Overview of previous U.S. studies testing the family process model
Table 2.	PHDCN sample characteristics
Table 3.	Measurement of independent variables and range, mean, and standard deviation for the PHDCN data
Table 4.	Correlations among path model variables of the PHDCN
Table 5.	Fit indices and $\chi^2$ change of all competing path models constructed using PHDCN
Table 6.	Unstandardized parameter estimates for all paths in the family process model constructed with PHDCN data with direct paths from family conflict to child outcomes and with paths of interest constrained to be equal across groups
Table 7.	Unstandardized parameter estimates for all paths in the family process model constructed with PHDCN data with direct paths from family conflict to child outcomes, with inclusion of social stressors to help explain the association between income-to-needs ratio and family conflict
Figure 1.	The family stress model of economic hardship
Figure 2.	Competing models for research question 1
Figure 3:	Inclusion of social stressors to help explain the association between income-to-needs ratio and family conflict
Figure 4.	Competing models for research question 3
Figure 5.	Model '1b': Preferred path model for research question 1
Figure 6.	Family process model with direct path from family conflict to outcomes, constrained across groups
Figure 7:	Inclusion of social stressors to help explain the association between income-to-needs ratio and family conflict

## ACKNOWLEDGEMENTS

I would like to thank everyone who encouraged me and showed me kindness along the way. In particular, I would like to thank my “informal” teachers and mentors for their encouragement and guidance: Patricia Peinado, Lisa Fortuna, Carola Suarez-Orozco, Lauren Hale, Geetha Gopalan, and Kimberly Howard. I would also like to thank Scott Drotar for his guidance and feedback regarding data analysis.

Thanks to my sponsor and advisor, Dr. Jeanne Brooks-Gunn for allowing me to learn from her and for giving me the opportunity to be a graduate research fellow at the National Center for Children and Families. I would also like to acknowledge the other members of my dissertation committee: Matt Johnson, Julien Teitler, Marla Brassard, and Marie Miville for their time and support. Thank you to all the other graduate fellows at NCCF for their support and camaraderie – in particular future doctors Jondou Chen and Alex Holod, and to the postdocs for their guidance.

In a more personal note, I would like to thank my parents for migrating to the U.S. from Mexico in pursuit of a better life for my brother and me, and for all the sacrifices they’ve made – and continue to make – on a daily basis. I would like to thank my family, friends, and loved ones for their unending words of encouragement. Finally, I would like to thank my best friend, Alma Rosa Montanez, for her support, encouragement, and friendship.

## **Introduction**

The adverse effects of poverty on youth have been extensively documented (Duncan & Brooks-Gunn, 1997; Huston, McLoyd, and Garcia-Coll, 1994; McLeod & Shanahan, 1993). Adolescents living in families that experience poverty and economic hardship are more likely to engage in health risk behaviors, have lower levels of academic achievement, and suffer from socioemotional and behavioral problems (Brooks-Gunn & Furstenberg, 1989; Brooks-Gunn, Duncan, & Maritato, 1997; Conger, Ge, Elder, Lorenz, & Simons, 1994; Duncan, Brooks-Gunn, & Klebanov, 1994). Research in developmental psychology suggests that economic hardship affects youth indirectly via its negative impact on several family processes (Beiser, Hou, Hyman, & Tousignant, 2002; Brody, Stoneman, Flor, McCrary, Hastings & Conyers, 1994; Conger et al., 1994; McLoyd, 1990, 1998; Mistry, Vandewater, Huston, & McLoyd, 2002). Specifically, parents' mental well-being, family relations, and ultimately parenting, can be adversely affected by the strain of economic hardship and can lead to deleterious consequences on adolescent well-being (see Figure 1).

While considerable progress has been made in documenting whether these processes account for the adverse effects of economic hardship on family functioning in European American and African American families (Conger, Ebert-Wallace, Sun, Simons, McLoyd, & Brody, 2002; Jackson, Brooks-Gunn, Huang, & Glassman, 2000; McLeod, Kruttschnitt, & Dornfeld, 1994; McLeod & Shanahan, 1993; McLoyd, Jayaratne, Ceballo, & Borquez, 1994; McLoyd, 1998), less is known about the processes mediating the effects of economic hardship on



Latino families.<sup>1</sup> The studies that have examined whether the family process model generalizes to Latinos have not disaggregated by subgroup or accounted for generation status (e.g., Loukas, Prelow, Suizzo, & Allua, 2008; Parke et al., 2004; Prelow, Loukas, & Jordan-Green, 2007). Given the differential health (Abraido-Lanza, Chao, & Florez, 2005; Acevedo-Garcia, Soobader & Berkman, 2005) and mental health (Alegria et al., 2008; Ortega, Rosenheck, Alegria, & Desai, 2000; Vega et al., 1998) outcomes found within the Latino population as a function of country-of-origin and generation status (number of generations a family has been in the U.S.), it is critical to account for these factors when testing the generalizability of the family process framework to Latinos. The lack of research on the applicability of the family process model to Latino families is surprising as Latinos are disproportionately affected by economic disadvantage - - 31% of Latino children live in poverty compared to 11% of non-Latino whites (Wight, Chau, & Aratani, 2010).

This study addresses these limitations in the literature by examining the applicability of the family process model to a large sample of Mexican heritage youth and families. Specifically, this study tests the family process model (where low income-to-needs ratio is hypothesized to be negatively associated with maternal mental well-being and more family conflict; maternal mental well-being and family conflict are in turn posited to be associated with less warmth and more aggressive parenting, which should ultimately be associated with more child internalizing and externalizing behaviors; see Figure 2, model 1a) in a sample of 787 Mexican heritage (hereafter “Mexican American”) families of varied generation status and income. Identifying pathways of contextual risk among a diverse sample of Mexican American families is critical because the

---

<sup>1</sup> In this study, the terms “Latino” and “Hispanic” are used interchangeably, trying to keep the term that has been used in the referenced work.

family process model may operate differently (a) among Mexican American families of different generation levels (b) between Mexican American families and other groups to which this model has been applied. To address whether family processes function similarly within the Mexican American group across generations, the pathways for the 1<sup>st</sup> and 2<sup>nd</sup> generation families in the Mexican American sample<sup>2</sup> will be compared. To address whether family processes function similarly across ethnic group, the model is tested across the Mexican American, European American, and African American families.

In testing whether the family process model generalizes across these different subgroups, this study considers whether family conflict has a direct or indirect impact on child outcomes (see Figure 2). To date, studies examining the family process model have been inconsistent in whether they test for a direct effect of family conflict on child outcomes (see Table 1). For example, Conger's study of the family stress model with boys (Conger et al., 1992) did not include a test of the direct effect of family conflict on youth outcomes, yet a test of the direct effect was included in the study of girls (Conger et al., 1993). Of the studies examining the family process model with samples that include Mexican Americans, two have tested for a direct effect of family conflict on child outcomes (Dumka, Roosa, & Jackson, 1997; Parke et al., 1994). One study, examining only a Mexican American sample, found a direct effect of family conflict on child outcomes, but only when the child's reports of family conflict, parenting, and child adjustment were used (Dumka et al., 1997). When mother's reports of family conflict, parenting, and child adjustment were used family conflict was not significantly associated with either

---

<sup>2</sup> "First generation" refers to immigrants who were born in Mexico, "second generation" refers to someone born in the U.S. to at least one foreign born parent, and "third generation" status (and higher) refers to someone born in the U.S. to two U.S.-born parents. Thus, "first generation" in this study refers to families in which both mother and child are foreign born. "Second generation" families are those in which the mother is foreign born and the child is U.S. born.

parenting or child outcomes. The other study (Parke et al., 1994), which examined both Mexican Americans and European Americans, found a significant direct effect of family conflict on child outcomes for Mexican Americans, but not for European Americans. Thus, the first research question in this study has two aims: (1) to test whether the family process model generalizes across 4 different subgroups (1<sup>st</sup> generation Mexican American families, 2<sup>nd</sup> generation Mexican American families, African American families, and European American families) and (2) to test whether the influence of family conflict on youth outcomes is indirect only (via parenting), or whether it also has a direct impact on youth internalizing and externalizing behaviors consistently across subgroups.

The second and third research questions in this study narrow in on the first pathway of the family process model, aiming to better understand how poverty influences maternal mental well-being. Specifically, the second question examines whether four social stressors: (1) perceived discrimination, (2) fear for safety, (3) lack of social support from friends, and (4) lack of social support from family members—in addition to self-reported depression—help explain the association between income-to-needs ratio and family conflict (see Figure 3).

The third research question in this study considers whether objective measures of neighborhood quality (immigrant concentration, concentrated poverty, and residential stability) help explain the association between household income and perceived discrimination, fear for safety, lack of social support from friends, and lack of social support from family members (see Figure 4). Thus, question three tests whether the association between income and mental health stress can be partially explained by the characteristics of the neighborhood in which one resides. Whether the influence of these neighborhood characteristics differs across Mexican American, African American, and European American families is also tested.

To review, this study asks the following 3 research questions:

- 1a. Does the family process model fit equally well across all subgroups?
- 1b. Is the influence of family conflict on youth outcomes indirect only (via parenting), or does family conflict also have a direct impact on youth internalizing and externalizing behaviors consistently across subgroups?
- 2a. Does inclusion of four social stressors (lack of family support, lack of friend support, discrimination, fear for safety) help understand the association between income-to-needs ratio and family conflict?
- 2b. Do the four social stressors influence family conflict similarly across groups?
- 3a. Do objective neighborhood characteristics (concentrated poverty, immigrant concentration, & residential stability) help explain the association between income-to-needs ratio and mental health stressors?
- 3b. Do neighborhood characteristics influence subgroups differently?

These questions are answered using longitudinal data from 2,025 participants in the Project in Human Development in Chicago Neighborhoods (PHDCN). Specifically, information from 787 Mexican American, 881 African American, and 357 European American mothers and their children inform the findings of this study.

## **Overview of Empirical Research**

Differences in health and academic outcomes by generation status (the number of generations a family has resided in the United States; Buriel & Cardoza, 1988) and Latino subgroup (i.e. Cuban, Puerto Rican, Mexican, etc.) indicate the importance of accounting for these two factors when studying health outcomes among Latinos. Variation in human capital, reasons for migration, and the political context of reception in the U.S. among these groups may differentially influence health outcomes (Alegria et al., 2007; Borrell, 2005; Gonzalez Burchard et al., 2005; Portes, Fernandez-Kelly, & Haller, 2005). This study focuses on Mexican Americans - the largest ethnic group in the U.S., the largest ethnic group among U.S. immigrants, and the largest subgroup of the U.S. Latino population (Pew Hispanic Center, 2011). In 2000, 22% of Mexican American children in non-immigrant families and 31% of Mexican American children in immigrant families were living in poverty, compared to 9% of White children (Hernandez, 2006). Epidemiologically, Mexican Americans are at an increased risk for negative developmental outcomes as they are overwhelmingly exposed to poor quality neighborhoods, poverty, and cultural stressors (Adler et al., 1994; Alba et al., 2010; Zambrana & Carter-Pokras, 2010). Despite being a population disproportionately composed of working-poor families, however, very little is known about the negative impact of economic hardship on Mexican American families and children. The studies that have examined whether the family process model generalizes to Mexican Americans (see Table 1) have not accounted for generation status (e.g., Loukas et al., 2008; Prelow et al., 2007). Because generation status has been linked to differential health and mental health outcomes for Mexican Americans (Vega et al., 1998; Wei et al., 1996), and because there may be important social and cultural differences between the 1<sup>st</sup> and 2<sup>nd</sup> generation (Buriel, Mercado, Rodriguez, & Chavez, 1991), this

characteristic needs to be accounted for when examining the extent to which economic hardship impacts family processes, and ultimately, adolescent well-being among this population.

### **Importance of Generational Status in Studies of Mexican Americans and Mexican American Families**

Research findings from public health, education, sociology, and psychology indicate that some of the health and education outcomes of Mexican American adults and children vary by generational status. Studies have found, for example, that first generation adults have better mental health outcomes in comparison to their U.S. born peers (Alegria et al., 2008); second generation Mexican Americans are more like than third generation students to get a college education (Telles & Ortiz, 2008); and families with members of mixed generation status (e.g. immigrant parent and U.S. born child) report greater family conflict than families whose members are all similarly acculturated (Falicov, 1996; Sciarra & Ponterotto, 1991). Such findings suggest that the generational status of the parent, child, and the composition of the parent-child dyad (e.g. immigrant parent and immigrant child; immigrant parent and U.S. born child) may differentially influence family processes within Mexican American families. To the extent that generation status impacts Mexican American outcomes, the family process model may function differently for 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican American households. Below, the research from public health which indicates that adult health outcomes may vary by generational status, as well as possible explanations for such findings, are considered. Afterward, literature examining mixed generation parent-child dyads, which suggests intergenerational households may be at greater risk for conflict as children transition into adolescence, is reviewed.

## **Adult Health Outcomes – Variation by Generation Status**

Over twenty years ago, the term “Hispanic paradox” emerged in the field of public health in reference to the paradoxical finding of better health outcomes among first generation Mexican Americans—despite their lower socioeconomic status (SES)—than their U.S. - born counterparts (Markides & Coreil, 1986). Since then, research finding a health advantage among first generation Latinos has grown, though the “paradoxical” findings have only been found for some health outcomes (e.g. substance use, pregnancy complications, low birthweight, mortality rates; Alegria et al., 2008; Cho, Frisbie, Hummer & Rogers, 2006; Collins & Shay, 1994; Liao et al., 1998; Singh & Yu, 1996) and seem to be most consistent among Mexican Americans. Alegria and colleagues (2008), for example, recently used a nationally representative sample to examine the prevalence of mental illness among immigrant Latinos, U.S. born Latinos, and non-Latino whites. Support was found for a “Hispanic paradox” and an “immigrant paradox.” Consistent with the Hispanic paradox, Latinos reported lower prevalence rates than non-Latino whites for any lifetime disorder, substance disorder, and anxiety disorder (with the exception of agoraphobia without panic disorder). Consistent with an immigrant paradox, U.S. born Latinos were at significantly higher risk than those born abroad for major depressive disorder, posttraumatic stress disorder, alcohol abuse, drug abuse, alcohol dependence and drug dependence. Interestingly, however, when Latino participants were disaggregated by subgroup, no significant differences were found between migrant and U.S. born Puerto Rican subjects. Moreover, among Cubans, first generation status only demonstrated a protective effect for substance disorders. The paradox was only consistently observed for Mexican subjects, with Mexican immigrants reporting significantly lower prevalence of depressive disorders, anxiety disorders, and substance disorders compared with U.S. born Mexican subjects.

**Data artifacts? Migratory factors? Acculturation effect?:  
Possible Explanations for the Variation in Latino Health Outcomes by Generation Status**

Why might immigrants appear healthier despite their lower SES? Data artifacts, migratory factors, and protective cultural factors are the most common explanations considered to explain why first generation Latinos may evidence better health outcomes despite their lower socioeconomic status (Abraído-Lanza, Dohrenwend, Ng-Mak, & Turner, 1999; Franzini, Ribble, & Keddie, 2001; Palloni & Arias, 2004). The underreporting of Latino origin on U.S. death certificates, for example, presents a significant problem in accurate estimation of mortality rates, as death certificates are the prime data collection tool for mortality statistics (Palloni & Arias, 2004). In addition, inconsistent measures of Latino identity (self-report vs. Latino surname), measurement error in years since immigration, and underreporting of health problems may result in data artifacts that suggest a health advantage where one doesn't actually exist (Franzini et al., 2001; Jasso, Massey, Rosenzweig, & Smith, 2004; Palloni & Morenoff, 2001).

In addition to data artifacts, migratory factors have been tested as potential explanations for the epidemiological paradox. Specifically, immigrant selection into the U.S. ("healthy-migrant effect") and return migration ("salmon-bias" effect) have been posited to account for better health outcomes among immigrants. The healthy-migrant effect proposes that the act of immigration itself is a selective process, akin to "survival of the fittest," where only those who are most healthy and resourceful actually manage to migrate (Abraido-Lanza et al., 1999; Sorlie, Backlund, Johnson, & Rogot, 1993). This hypothesis is supported by the finding that, on average, migrants are healthier than those who do not migrate and may be healthier than the average individual in the receiving population (Marmot, Adelstein, & Bulusu, 1984). The salmon-bias effect refers to the propensity of some immigrants to return to their country of origin



following a period of temporary unemployment or illness (Abraido-Lanza et al., 1999; Pablos-Mendez, 1994). Abraido-Lanza and colleagues (1999) tested the salmon bias and healthy migrant hypotheses using data from the National Longitudinal Mortality Study (NLMS) and found patterns of mortality rates for Latinos which could not be explained by either hypothesis. U.S. born Latinos, for example, evidenced lower mortality rates than U.S. born whites. This finding could not be explained by the healthy migrant effect because U.S. born Latinos are not immigrants. Moreover, Cubans and Puerto Ricans had lower mortality rates than non-Latino whites. Because Cubans cannot easily return to their home country and deaths in Puerto Rico are tabulated in U.S. mortality statistics, this finding could not be explained by the salmon bias. Such findings suggest that the salmon effect and healthy migrant hypotheses do not adequately account for the Hispanic paradox. Similarly, Palloni & Arias (2004) tested the adult mortality advantage and found it only existed for some foreign born Hispanics. Specifically, foreign born Mexicans and foreign born Central & South Americans experienced mortality rates 35% to 47% lower than those experienced by non-Hispanic whites. Interestingly, this advantage was not found for Puerto Ricans or Cubans. Further analyses revealed strong support for return migration effects for foreign-born Mexicans only. These findings, like Abraido's, indicate that migratory factors alone do not completely explain the Hispanic paradox.

A third line of research has focused on a socio-cultural explanation, namely, that these health paradoxes are due to protective social practices inherent to Latino culture (e.g. familism, religiosity, and restrictive substance use norms). Latinos, for example, tend to be more family oriented (Freeberg & Stein, 1996; Ramirez et al., 2004) and endorse more restrictive substance use norms (Acevedo, 2000) in comparison to European Americans. These protective cultural practices are speculated to diminish with time spent in the United States and subsequent

acculturation (adoption of the beliefs, values, and norms of behavior of the dominant culture).<sup>3</sup>

The decline in health associated with time in the U.S. has thus been called an “acculturation effect,” (Abraido-Lanza et al., 1999; Scribner, 1996) occurring both within one generation (Kaestner, Pearson, Keene, & Geronimus, 2009) and across generations (Vega & Amaro, 1994). A literature review on the association between smoking rates and acculturation among Latinos (Bethel & Schenker, 2005), for example, illustrates a gendered acculturation effect. The authors reviewed 11 pertinent studies and found that women who were less acculturated had significantly lower rates of cigarette use in comparison to more acculturated Latinas and non-Hispanic females. Despite differences in the measurement of acculturation (language, time in U.S., multidimensional scale) and method used, nine out of the eleven studies reviewed found higher rates of cigarette smoking among more, versus less, acculturated Latinas. The associations between acculturation and smoking rates among men were less consistent – with three studies showing a negative association between acculturation and smoking rates. The association between acculturation and men’s smoking behaviors may not have been positive because the smoking rates for men in Mexico are higher than for men in the U.S. Female smoking rates in Mexico, however, are lower than female smoking rates in the U.S. The authors posited that as Hispanic women acculturate, their behavior becomes more strongly influenced by the norms and practices of the dominant group; therefore, their smoking rates increase to become closer to those of the U.S. non-Hispanic white population. Similar acculturation effects have been found for drinking and divorce, suggesting that the erosion of restrictive norms may be partially causing the decline in health behaviors.

---

<sup>3</sup> The concept of acculturation refers to the process of giving up traditional forms of behavior and adopting behaviors of the host country (Keefe & Padilla, 1987). Acculturation is considered to be a multidimensional process involving changes in attitudes, behavior, awareness, loyalty and values. Recent perspectives view the process as transactional, involving change in both immigrant groups and the host culture (Gonzales et al., 2001).

### **Social Determinants of Health: An Alternative to the Acculturation Explanation**

Acculturation research – and the use of culture-centered acculturation models – to explain health outcomes, however, has been criticized. Critics of acculturation research argue that a lack of clarity and consistency in the definition and measurement of acculturation leave its central concepts ambiguous and inconsistent (Hunt, Schneider, & Corner, 2004). Some argue that social and economic determinants are more important predictors of health disparities than is culture – and that the persistent use of acculturation models decenters social determinants of health as key factors in health outcomes (Sheldon & Parker, 1992; Zambrana & Carter-Pokras, 2010).

Consistent with this criticism, yet complementary to the theory of acculturation, is the possibility that for Latinos, time in the U.S. may result in increased exposure to risk factors resulting from greater contact with the dominant society (e.g. stressful social encounters and discrimination; Finch and Vega, 2003; Perez, Fortuna & Alegria, 2008). As Latino immigrants learn English they may become more aware of cultural nuances (Finch et al., 2000), and as they spend more time interacting with members of the dominant society they may become aware of their minority status in the U.S. (Finch, Kolody, & Vega, 2000; Perez et al., 2008; Vega & Gil, 1998; Viruell-Fuentes, 2007). Consequent subjective perceptions of low social status may increase risk of stress and psychopathology (Adler, Epel, Costellazzo, & Ickovics, 2000). Moreover, because disadvantaged minorities are more likely to be exposed to multiple risk factors (e.g. unsafe neighborhoods, crowded housing, unequal health care) and stressful social environments, Latinos may be more vulnerable to the effects of stress (Allison, 1998; Meyer, Schwartz, & Frost, 2008) and more likely to exhibit early health deterioration or “weathering” (Geronimus, 1992). Thus, some researchers theorize that once Mexican Americans have been fully subsumed into these high-risk environments – and their cultural assets have been exhausted

– their behavioral norms and health outcomes will resemble those of other socioeconomically disadvantaged groups living in similar community environments (James, 1993; Scribner 1996).

### **Stress, Discrimination, and Health**

Recent research examining the associations between time in the U.S., stress, allostatic load, perceived discrimination, and the mental and physical health of Latinos supports this theory (Cook, Alegria, Lin & Guo, 2009; Flores, Tschann, Dimas, Bachen, Pasch and deGroat, 2008; Kaestner et al., 2009; Perez et al., 2008). Kaestner and colleagues (2009), for example, found evidence of weathering among older Mexican immigrants. Specifically, researchers analyzed data from the National Health and Nutrition Examination Survey, 1988-1994 and found a health advantage among Mexican immigrants that disappeared with time in the U.S. The authors found that among older Mexican immigrants (ages 45-60), those who had been in the U.S. for over 20 years had five times greater odds of having a high allostatic load score in comparison to peers who had been in the US for less than 11 years. Notably, these estimates remained stable in the presence of controls for medical care utilization and health behaviors, suggesting that the acculturation effect could not be reduced to the adoption of unhealthy lifestyles alone.

Complementary findings have been reported in studies analyzing data from the National Latino and Asian American Study (NLAAS) – a nationally representative survey of the prevalence of mental disorders among Latinos and Asian Americans in the U.S. A psychiatric epidemiology survey, the NLAAS was designed to investigate the influence of social position, environmental factors, and psychosocial factors on Latino and Asian American mental health (Alegria et al., 2004). Findings from the NLAAS indicate that time in the U.S. is positively associated with greater perceived discrimination and family conflict among Latinos (Perez et al., 2008; Cook, 2009). Perez and colleagues, for example, found that exposure to U.S. culture (as measured by

age of arrival or growing up in the U.S.) was positively associated with discrimination, as nearly half of U.S. –born Latinos reported everyday discrimination in comparison to only one-quarter of immigrants. In addition, English proficiency was associated with greater perceived discrimination, suggesting that language isolation may reduce the perception of discrimination and that English acquisition may allow for greater comprehension of discriminatory acts. Moreover, a positive association was found for education and perceived discrimination, where Latinos with some college education and college graduates had an increased likelihood of reporting everyday discrimination compared to those having less than a high school education. U.S. born Latinos may have greater expectations for their quality of life in comparison to immigrants (Bacallao & Smokowski, 2007; Cortes, Rogler, & Malgady, 1994), and thus experience greater social stress if these expectations remain unfulfilled because of discrimination (Burnam, Hough, Karno, Escobar, & Telles, 1987).

Using data from the NLAAS, Cook and colleagues (2009) assessed whether six factors (exposure to discrimination, family cultural conflict, ethnic identity, dissatisfaction with economic opportunities, perceived social status, and neighborhood safety) linked time in the U.S. to Latino mental health outcomes. Differences in these 6 factors among U.S. born Latinos and 3 immigrant Latino groups living in the US for different lengths of time (0-10, 11-20, 21+ years in the U.S.) were analyzed in 3 steps: first, unadjusted past-year prevalence rates of psychiatric disorders were examined. Second, the prevalence of psychiatric disorders among the three immigrant groups was estimated after making the distribution of all their other observable attributes equal. Third, counterfactual comparison groups were created for the three immigrant groups by selecting the U.S. born individuals and changing their group membership from U.S. born to one of the three immigrant categories (0-10, 11-20, or 21+ years in the U.S.). The

underlying factors that potentially explained differences in mental health among immigrant and U.S. born groups were then identified.

Initial unadjusted analyses revealed that Latino immigrants living in the U.S. for 10 years or less had significantly lower rates of any past-year psychiatric disorder and any depressive disorder in comparison to U.S. born Latinos. No significant differences were found between U.S. born Latinos and Latino immigrants who'd lived in the U.S. for more than 10 years. After adjustment for model covariates, however, no differences in rates of psychiatric disorders were found between immigrant groups, with the exception of Latinos living in the U.S. for more than 21 years being more likely to have a past-year anxiety disorder than their U.S. born counterparts. Perceived discrimination, family cultural conflict, and English language proficiency were positively correlated with past-year psychiatric disorder. High social standing in the U.S., neighborhood safety, being married, being employed and having parents with at least 8 years of education were negatively correlated with past-year psychiatric disorder.

After additional adjustment for gender and age, the counterfactual immigrant groups showed increasing risk of disorder with increasing time in the U.S. Reducing perceived discrimination from the level of the U.S. born Latinos to the level of immigrants living in the U.S. for 11-20 years and 21 or more years led, respectively, to a 4.5% and 2.6 % decrease in the predicted probability of any past-year psychiatric disorder. Reducing family cultural conflict from the level of U.S. born Latinos to the level of immigrants' living in the US for 11-20 years and 21 years or more resulted in a decrease of greater than 1% in the predicted probability of any past-year psychiatric disorder. Adjusting the values for the other four pathways (ethnic identity, dissatisfaction with economic opportunities, perceived social status, and neighborhood safety) did not lead to changes in predicted risk of psychiatric disorders. Cook's findings suggest that

U.S. born Latinos experience higher levels of discrimination and family conflict in comparison to immigrants, and that these contextual factors – rather than nativity- account for the immigrant paradox effect.

In conclusion, there is some evidence that first generation Mexican Americans experience better health outcomes —despite their lower socioeconomic status—than their U.S.-born counterparts. While some researchers think this paradoxical finding is real, and hypothesize that it might be due to migrant factors (selection, return migration) or protective socio-cultural practices, other researchers speculate that it might just be a data artifact. Studies thus far indicate that neither migratory factors nor health behaviors alone completely explain the paradox. While inconclusive, research suggests that greater time in the U.S. may place Mexican Americans at risk for adverse health outcomes, either because of a loss of protective socio-cultural processes or because of the stressors that arise from being part of a disadvantaged group. Thus, as Mexican Americans spend more time in the U.S. they may become more perceptive of differential treatment and unfairness (Cook et al., 2009; Finch et al., 2000; Perez et al., 2008), experience greater family conflict (Hovey & King, 1996; Cook et al., 2009), experience greater cumulative stress (Kaestner et al., 2009), and experience more frustrated social expectations (Burnam et al; Cortes et al., 1994). In turn, these experiences may drive their behavioral norms and health outcomes to resemble those of other socioeconomically disadvantaged groups living in similar community environments. To the extent that the mothers in our 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican American families differentially experience such risk factors, the associations in our model may vary.

### **Generation Status and Parent-Child Dynamics**

In addition to the stressors of economic hardship, Latino households with mixed generation parent-child dyads (immigrant parents with U.S. born children), as well as families with children who grew up for a portion of their lives in Mexico, may be at particular risk for conflict as children transition into adolescence. Specifically, disruptions in family power dynamics and gaps in acculturation between children and foreign-born parents may aggravate the parent-child relationship (Szapocznik, Kurtines, & Fernandez, 1980; Velez & Ungemak, 1995). Because children learn English at a quicker rate than their parents, they often play the role of cultural broker for their immediate family (Love & Buriel, 2007). Parents' dependence on the child's knowledge can undermine parental authority and disrupt established familial hierarchy (Chao, 2006; Velez & Ungemak, 1995). Similarly, because children spend the majority of their time in U.S. schools, they tend to acculturate faster than their parents (Baptiste, 1993; Szapocznik & Truss, 1978). Differences in rates of adaptation to - and adoption of - U.S. culture may create an "acculturation gap" between children and their parents (Coatsworth, Pantin, Szapocznik, 2002; Szapocznik, Kurtines, & Fernandez, 1980). Specifically, younger family members who are rapidly acculturating may adopt norms and values of the host society that conflict with those held by older family members who are less acculturated (Szapocznik & Williams, 2000). The increased autonomy of Latino adolescents within a U.S. culture that favors individualism may be incompatible with Latino parents' adherence to traditional values emphasizing cohesion, parental control, and *familism* (a construct used to describe Latinos' strong identification with and attachment to the family; Marin & Marin, 1991; Sabogal, Marin, Otero-Sabogal, Marin & Perez-Stable, 1987). Conflict may therefore stem from parental dissatisfaction with children's adoption of U.S. norms (Hernandez & McGoldrick, 1999). This



hypothesis is supported by prior research which suggests that Latino adolescents' involvement with U.S. culture is positively associated with family conflict (Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006; Samaniego & Gonzales, 1999; Smokowski & Bacallao, 2006). Conflict within Latino immigrant families may also result from restrictive parenting styles adopted in response to parents' perceptions of danger in unfamiliar environments (danger which may not be perceived by their more acculturated children; Bacallao & Smokowski, 2007). While these conflicts may exist to some extent in most or all Latino families, they may be more exaggerated in families with U.S. born or foreign born children who have adapted to the U.S. at a different rate than their immigrant parents. Alternatively, parents and children that have been in the U.S. for a longer period of time (in comparison to 1<sup>st</sup> generation parents and children) may report more conflict because they may be more removed from the traditional cultural values that discourage conflict (Flores, Tschann, VanOssMartin, & Pantoja, 2004).

This section has served to review why it is important to consider generational status when studying Mexican American families. Next, an overview of the family process model and its origins are presented.

### **Linking Economic Hardship to Child Outcomes in Developmental Psychology:**

#### **Studies of Families Enduring Income Loss and Poverty**

Much of what is known about the processes through which economic hardship influences families and youth can be attributed to studies examining the effects of exogenous change on family income. Studies of families enduring financial loss due to the Great Depression (Elder, 1974) and the agricultural crisis of the 1980s (Conger et al., 1990) established a framework from which to explore the psychosocial pathways connecting economic hardship to adverse family

functioning, and ultimately poorer adolescent well-being. Elder's seminal study on families of the Great Depression (Elder, 1974; Elder, Van Nguyen & Caspi, 1985) revealed that the impact of drastic income loss on children was mediated by several family adaptations, including a shift toward more intensive labor households (i.e. mothers and children working outside the home) and altered family relationships. In these studies, Elder and colleagues found mainly indirect effects of economic hardship on children's adjustment through parents' psychological functioning and parenting behaviors. Specifically, in households where fathers' experienced heavy loss of earnings, fathers - but not mothers - demonstrated greater emotional instability and explosiveness. This change enhanced the tendency for fathers to be more rejecting, and to be more inconsistent and punitive in their discipline. Notably, the negative parenting behaviors of fathers influenced boys and girls differently. In early childhood, boys were more likely than girls to be affected by family turmoil and punitive parenting, displaying poorer academic outcomes (Elder, 1999). By adolescence, however, girls experienced greater rejection from their fathers and displayed lower levels of psychosocial well-being in adolescence in comparison to boys. A proposed explanation for this finding is that in adolescence, girls may have been exposed to fathers more so than boys, as girls were expected to care for the household while their mothers sought work. Boys, on the other hand, were encouraged to seek paid work outside of the home. Indeed, adolescent boys whose fathers suffered income loss were less likely to perceive their fathers as attractive and more likely to express dependence on the peer group (Elder et al., 1985).

Building on this line of research, Conger and colleagues proposed the "Family Stress Model of Economic Hardship," (FSM) to understand how a severe downturn in the agricultural economy during the 1980s influenced the lives of 451 European-American families from rural Iowa (Conger, Rueter, & Conger, 2000; Conger et al., 2002; Conger & Elder, 1994). The FSM

proposes a series of indirect associations between economic hardship and children's adjustment (see Figure 1). The model posits that economic hardship results in economic pressure, which in turn increases parental distress. Parental distress, in turn, is believed to disrupt family relations and parenting, which then ultimately impact children's adjustment. A critical component of the family stress model is that it addresses the psychological strain of living with hardship by proposing an indirect association between economic hardship and parental distress via economic pressure on caregivers (Conger et al., 1992, 1993, 1994, 2002).

### **Testing the Proposed Pathways in the Family Stress Model: The Iowa Youth & Families Project**

A series of studies, first analyzing cross-sectional data from boys, then girls, and finally longitudinal data from boys and girls in the *Iowa Youth and Families Project* provide support for the proposed pathways in the family stress model (Conger et al., 1992, 1993, 1994, 1995). Participants in the *Iowa Youth and Families Project* were recruited through 34 public and private schools in the Midwest and visited by interviewers twice for approximately two hours. During the first visit, all family members completed questionnaires regarding individual family member characteristics and family economic circumstances. Within fourteen days, a second visit was conducted, during which family members were videotaped as they engaged in several structured tasks, such as discussing issues that led to disagreements within the family (e.g., chores, money, recreation, etc.) and trying to resolve such issues. The interactions were rated by trained observers for characteristics such as depressed affect, warmth and hostility.

The first study in this series (Conger et al., 1992) tested the family stress model with cross-sectional data from 205 7<sup>th</sup> grade boys and their families (mother, father and a sibling within 4 years of age of the seventh grader). Analysis of structural equation models revealed that

per-capita income, unstable work, and debt-to-asset ratio were significantly associated with family economic pressure. As expected, economic pressure was in turn, significantly associated with both father's and mother's depressed mood. Interestingly, mother's depressed mood—but not father's depressed mood—was significantly associated with marital conflict, which was negatively associated with mother's parenting (nurturing, involved, and low hostility). Father's depressed mood, while not associated significantly with marital conflict, was significantly negatively associated with father's parenting. While both maternal and paternal parenting constructs were positively associated with son's positive adjustment (as indicated by school performance, self confidence, and peer relations), the parenting constructs were more strongly associated with adjustment problems (depression, hostility and antisocial behaviors) among the boys in this sample.

The next study tested the family stress model on the 220 7<sup>th</sup> grade girls in the sample (Conger et al., 1993). This test of the family stress model, however, proposed that the model might operate differently than it did for boys in two ways. First, it included a direct pathway between parental depressed mood and adolescent adjustment. While the authors did not find a direct association between parental depressed mood and adolescent adjustment among boys, they hypothesized that they would find it for girls, as previous research suggested that maternal depression was associated with adverse outcomes for girls, but not boys (Hops, Sherman, & Biglan, 1990). Second, based on the premise that girls are less oppositional than boys, the authors expected that girls would be less likely to elicit withdrawal and harshness in parenting among depressed parents. Analysis of the proposed pathways confirmed that economic conditions influenced the family processes and adolescent outcomes of girls in a similar manner to those previously found for boys, with some exceptions. Unlike the direct association found

between father's depressed mood and hostile parenting among adolescent boys, little evidence of a direct path from parental depression to parenting was found among adolescent girls. This finding was consistent with the authors' hypothesis that girls (versus boys) are less likely to irritate depressed parents and elicit parental hostility. Moreover, while paternal depression was not associated with marital conflict in the male sample, both paternal and maternal depression were associated with marital conflict in the female sample. As stipulated, parental depression - especially maternal depression - was found to have a negative direct association with positive adolescent adjustment. The daughters of mothers who expressed greater depressed mood were less likely to endorse statements of self-confidence and have less favorable peer relations and school outcomes.

These two studies suggest that while good parenting is associated with positive adjustment for both boys and girls, problems with parenting are more strongly associated with adjustment problems in boys and girls. In addition, this finding suggests that girls are particularly susceptible to the direct effects of maternal and paternal depression on positive adjustment. A similar pattern of relations emerged when the model was tested using longitudinal data (1994) and data from the Oregon Youth Study (1995), where stressful conditions were positively related to parent depressed mood, depressed mood was in turn associated with greater disruptions in parenting, and disruption in parenting was associated with adolescent adjustment problems (e.g., lower school achievement, poor peer relations and antisocial behaviors). A consistent limitation of these studies, however, is their generalizability to non-rural, non-European American populations.

### **Generalizability of the Family Stress Model: Testing the Model with Diverse Samples**

Whether the family stress model can be applied to ethnically diverse samples is an important consideration, as the impact of economic hardship on persistently low-income minority families might be different than the impact of economic hardship on European American families who have recently experienced economic loss (McLoyd, 1990). Limited personal and community resources (e.g., low social support, concern for neighborhood safety) may heighten the effect of economic hardship on families constantly straddling the poverty line. Addressing the question of generalizability, McLoyd and colleagues (1994) tested the indirect effects of maternal unemployment and work interruption on 241 single African American mothers and their adolescent children. McLoyd found that current unemployment was related to greater depressive symptoms in mothers, which in turn predicted more frequent punishment of adolescents. More frequent maternal punishment was associated with increased depressive symptoms and cognitive distress in adolescents. McLoyd's findings suggest that, indeed, indirect pathways via maternal mental health and parenting also link economic loss to adolescent outcomes in single parent African-American families. An important distinction to be made, however, is that while Conger focused on parental hostility (Conger et al., 1994) McLoyd focused on parental punishment (McLoyd et al., 1994). Despite differences in measures of parental psychological state, family dynamics, and adolescent outcomes, the consistency in findings in this study (and those discussed below) support a general family process model where economic hardship negatively affects parental mental health, parenting, and ultimately child and adolescent well-being.

Mistry, Vendewater, Huston & McLoyd (1992) extended the application of the family stress model to Latinos by testing its applicability to a sample of 419 poor, urban families of

primarily African American (57%) and Latino (28%) descent. Families were participating in the *New Hope Project*— an experimental study designed to determine whether job search assistance, subsidized health care, subsidized child care, and income supplements would improve the life conditions of poor families. Mean household income for this population was \$15,280 (ranging from \$1,276 to \$30, 723) and most households were headed by a single parent (83%). Multiple informants were used, with parents reporting on economic hardship, perceived economic pressure, psychological distress, and parenting (discipline strategies). Observational measures of parental warmth were collected by interviewers, and information on child social competence and conduct problems were collected via teacher report. Analyses of cross-sectional data using structural equation models revealed that parents' perception of economic pressure and psychological well-being mediated the association between economic hardship and parenting. Low income and financial strain were associated with lower self-efficacy and greater perception of depression among parents. Distressed parents reported greater problems disciplining their children and were observed to show less warmth in their interactions in comparison to non-distressed parents. In turn, children of distressed parents were perceived by their teachers to be less socially competent and to display more problem behaviors. No gender differences were found. Notably, these pathways functioned similarly for African American and Latino families. Regrettably, the Latino population in this study was too small to analyze by subgroup. As discussed previously, subgroup differences within the Latino population have been found to be differentially associated with health outcomes.

A study which did consider the generalizability of the family stress model to a particular Latino subgroup was conducted by Parke and colleagues (2004). Specifically, cross-sectional data from 278 Mexican American (60%) and European American (40%) families with fifth

graders was used to test whether the pathways in the FSM were the same across ethnic groups. Information about family finances, economic stress, economic pressure, depressed mood, marital problems, and child adjustment problems was collected from parents. Both parents and children provided information about hostile parenting. Additionally, Mexican American parent's level of acculturation was assessed, using a multidimensional scale (ARMSA-II; Cuellar et al., 1995). A series of structural equation models were then tested both to confirm the hypothesized link between economic hardship and child well-being, and also to test model invariance across the European American and Mexican American samples. Analyses revealed similar links among the constructs for both ethnic groups – with some exceptions. For both mothers and fathers, economic hardship was positively associated with economic pressure. However, per-capita-income was more highly related to economic pressure in European American families than in Mexican American families. This may have been because the absolute level of family income was higher (with a greater range) for the European American families. For both European American and Mexican American families, maternal and paternal depressive symptoms were positively associated with marital problems and hostile parenting. However, no evidence was found for a mediated pathway between marital problems, parenting, and child outcomes. Instead, direct links from marital problems to child outcomes and paternal hostile parenting to child outcomes were found. Notably, the strength of the association between marital problems and child adjustment was higher for the Mexican American families, suggesting that Mexican American children may be more affected by parental strife in comparison to European American children.

While Parke's study supports the generalizability of the family stress model to Mexican Americans, the pattern of some relationships within the sample varied by acculturation level.



Maternal acculturation, for example, was associated with higher reported levels of marital problems, but lower levels of hostile parenting. Due to a small sample size (n=167 Mexican Americans) and a disproportionate number of Mexican immigrant parents with U.S. born children (83% of Mexican American children were born in the U.S.), the authors were not able to disaggregate the Mexican American families by generation status. Thus, we do not know if the patterns found by Parke and colleagues would generalize to both first and second generation families.

### **Parenting and Youth Outcomes among Ethnically Diverse Families**

Yet another reason to examine whether the family stress model generalizes across different ethnic groups is the possibility that minority families may adapt their parenting styles to in response to perceived dangers in environment (Simons, Lin, Gordon, Brody & Conger, 2002). Below, the literature on parenting and youth outcomes – and possible adaptations among Mexican American families is considered

**Parenting and youth internalizing and externalizing symptoms.** Externalizing behavior refers to acts of aggression (e.g., fighting, bullying), hostility (e.g., anger, tantrums) and noncompliance (e.g., oppositional behavior). The presence of these behaviors has been linked to academic underachievement, immature and unrewarding social relationships, delinquency during adolescence, and criminality in adulthood (Farmer, 1995; Hinshaw, Han, Erhardt & Huber, 1992; Parker & Asher, 1987). Family conflict and violence within the home (Abidin, Jenkins, & McGaughey 1992; McCloskey, Figueredo, & Koss, 1995; Shaw & Emery, 1988), harsh parental discipline and physical abuse (Dodge, Pettit, & Bates, 1994), and a lack of positive parenting (Deater-Deckard, Dodge, Bates & Pettit, 1996) have been identified as risk factors for externalizing behaviors for both boys and girls. Parenting behaviors such as monitoring and limit

setting, on the other hand, are associated with a decreased incidence of externalizing behavior in adolescence (Aunola and Nurmi, 2005; De Kemp, Scholte, Overbeek, & Engels, 2006). Positive parental involvement may decrease risk for deviance by promoting competence and the internalization of parental values. Positive parental involvement and warmth have been negatively associated with adolescent conduct problems concurrently and prospectively (Klein & Forehand, 2000), as well as with adolescent externalizing trajectories (Scaramella, Conger, & Simons, 1999).

Internalizing symptoms generally refers to overlapping symptoms of depression (e.g., sad mood, fatigue, guilt, and worthlessness) and anxiety (e.g., excessive worry about future events or past behaviors, over concern about social or academic competence, excessive need for reassurance and somatic complaints) (Achenbach, 1991; Tannenbaum, Forehand, & McCombs-Thomas, 1992). Some researchers argue that depressed and anxious mood co-occur so frequently in adolescents that these mood states are largely inseparable from one another (Finch, Lipovsky, & Casat, 1989). While internalizing symptoms and disorders may seem relatively common during adolescence (10 to 15 percent of U.S. youth experience *some* symptoms of depression at any one time; Surgeon General, 1999), they can have lasting effects on social and emotional well-being if not addressed. Internalizing symptoms and disorders have been associated with drug use, reduced life satisfaction, suicide attempts, educational underachievement, and marital dissatisfaction (Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998; Woodward & Fergusson, 2001).

Parenting characterized by low levels of warmth and high levels of control and overprotection has been associated with adolescent depressive symptoms (Gil-Rivas, Greenberger, Chen, & Lopez-Lena, 2003; McFarlane, Bellissimo, & Norman, 1995) and

adolescent internalizing symptoms (Muris, Meesters, & van den Berg, 2003). Social learning theorists posit that too much parental involvement or control relative to a child's developmental ability may encourage anxiety and undermine a child's sense of autonomy, stunting the development of effective coping skills and resulting in the development of internalizing difficulties (Bayer, Sanson, and Hemphill, 2006; Rubin and Mills, 1991). In contrast, positive parenting (characterized by warmth and nurturance, the encouragement of autonomy, and attunement to the child's needs) is linked to healthy psychosocial adjustment in childhood and adolescence (Bayer et al., 2006).

While the associations between parenting and externalizing and internalizing behaviors reviewed above have been found rather consistently with middle class European American samples, the associations among some aspects of parenting and child outcomes may vary depending contexts families live in and the values families of different cultural backgrounds may hold. Because families may adapt their socialization processes in reaction to environmental challenges such as poverty, segregation, and racism (Garcia-Coll et al., 1996; Harrison, Wilson, Pine, Chan, & Buriel, 1990), the same parenting practices may influence children differently across context (i.e., ethnic, socioeconomic, and community; Furstenburg et al., 1993; Garcia-Coll, Meyer, & Brillon, 1995; Harrison et al., 1990; Hoff-Ginsberg & Tardiff, 1995; Roosa, Morgan- Lopez, Cree, & Specter, 2002). Harsh disciplinary practices, for instance, have been found to increase the risk of externalizing problems among European American youth, but not among African American youth (Landsford, Deater-Deckard, Dodge, Bates & Pettit, 2004; Roche, Ensminger & Cherlin, 2007). Because minority children often face serious dangers in their communities, restrictive and controlling parenting practices might be necessary to ensure safety and therefore might be less damaging for minority children (Simons et al., 2002).

While minority families in the U.S. may face similar challenges, differences in cultural values, beliefs, and behavior patterns may influence how parenting practices adapt to meet these challenges (Garcia-Coll et al., 1996). Although there is some agreement that Mexicans value familism and interdependence (Cuellar, Arnold, & Gonzales, 1995; Vega, 1990), there has been considerable disagreement about the types of parenting strategies most often used by Mexican American parents. Parents of Mexican descent have been characterized as permissive, nurturant, and egalitarian (e.g., Delgado, 1980; Escovar & Lazarus, 1982; Vega, 1990). In contrast, Mexican American parents have also been described as authoritarian (e.g., Chilman, 1993; Harrison et al., 1990). In addition, Mexican American families have been characterized as having less conflict than Euro-American families (Vega, 1990). Latino families may express less family conflict than Euro-American families in part due to the hierarchical organization found in many Latino families (e.g., children are not supposed to question adults). Conversely, there may also be a preference among Latino families to not disclose familial conflict to strangers (Gonzales, 1997; Vega, 1990). Some studies suggest that variation in the child rearing practices of Mexican American families reflects immigration status and acculturation processes (Buriel, 1993; Buriel, Mercado, Rodriguez, & Chavez, 1991; Hill, Bush & Roosa, 2003), while other studies suggest that ethnic minority status is in fact what is driving the child rearing practices of Mexican American families (Varela et al., 2004; Luis, Varela, & Moore, 2008).

### **Differences in Mexican American Parenting Strategies – Possibly due to Acculturation.**

Hill and colleagues (2003) examined the extent to which inconsistent discipline and hostile control were associated with children's depression and conduct problems among a demographically comparable sample of 344 low-income Mexican American and European American mothers and children. After controlling for income and single-parent status, maternal

acceptance and conflict were significantly with associated with conduct problems. These associations were similar for both ethnic groups, indicating that families who show high levels of acceptance, warmth, and consistency in discipline, in combination with low levels of conflict and hostility, have children with fewer conduct problems – regardless of ethnic background. Similarly, consistency in discipline, low levels of conflict and hostile control, and acceptance were associated with lower levels of depressive symptoms for both Euro-American and Mexican American children. There were, however, some within-group differences among the Mexican American families, as the relation between acceptance and conduct problems differed for mothers who preferred speaking English versus Spanish. The relation between acceptance and conduct problems was stronger for the Spanish speaking sample than for the English speaking sample. This was explained by a positive association between hostile control and acceptance among the Spanish speaking sample – but not the English speaking Mexican American sample– suggesting that for Spanish speaking Mexican Americans, the use of hostile control co-occurs with maternal acceptance. Acceptance may therefore be more influential in reducing conduct problems in the context of hostile control for Spanish speaking–versus English speaking– Mexican American mothers.

### **Differences in Mexican American Parenting Strategies – Possibly due to Minority Status.**

In an effort to clarify whether the parenting practices of Mexican American parents are more reflective of Mexican culture or minority status in the U.S., Varela and colleagues (2004) interviewed 150 Mexican immigrant and Mexican American families in the U.S., European American families, and Mexican families in Mexico. The Mexican families were from Mexico City, and the rest of the families (Mexican American and European American) were from urban settings in northern Texas, Kansas & Oklahoma. Parent style was assessed using a 30-item

questionnaire which measured three parenting styles: (a) authoritarian (emphasizes obedience from children and enforces rules through power assertion; (b) authoritative (uses reasoning to achieve adherence to rules); and (c) permissive (places few demands on children, nondirective). After controlling for parent and child age, SES, and parent education, between-group differences in authoritarian parenting were found, where Mexican American families in the U.S. (immigrant and U.S. born) reported more authoritarian parenting than Mexican mothers, and U.S. born Mexican American mothers reported more authoritarian parenting than European American mothers. All parents, regardless of cultural group, reported more authoritative than authoritarian parenting styles in rearing their children. To assess the influence of individual and contextual factors on the parenting styles of the Mexican American families in the U.S., four hierarchical regressions were conducted. Neither parent assimilation, child assimilation, nor immigrant status (immigrant vs. U.S. born) explained the parenting styles among Mexican American families, raising the possibility that ethnic minority status, rather than affiliation to Mexican culture, contributed to the greater use of an authoritarian parenting style among Mexican American families residing in the U.S.

Regardless of the process shaping the parenting style of Mexican American families in the U.S., research suggests that some Mexican American parents combine controlling, harsh practices with a reason-oriented and accepting style (Hill et al. 2003). This type of parenting style is consistent with parenting styles observed in more collectivist cultures, and has not been associated with negative outcomes for children from collectivist cultural orientations (Chao, 1994; Rudy & Grusec, 2001, 2006). Children from collectivist cultures may not experience negative outcomes from highly controlling parenting because in families from more collectivist cultures, high levels of control are not necessarily the result of stress and need not be

accompanied by low levels of family closeness or warmth as in European American families (Carlson & Harwood, 2003; Ispa et al., 1994). Moreover, parenting that stresses respect for authority has been proposed to be consistent with Mexican culture and to serve an adaptive function for families living in unfamiliar environments (Knight, Virdin, & Roosa, 1994; Varela et al., 2004). Like with European Americans, warmth and supportive parenting strategies have consistently been associated with fewer conduct problems and depressive symptoms among Mexican Americans (Barrera et al., 2002; Dumka et al., 1997; Gonzales, Pitts, Hill, & Roosa, 2000).

As discussed above, it is possible that the Mexican American families in our sample will differ in their parenting practices in comparison to the other families in this study. Because adaptations in parenting among ethnically diverse families may serve a protective function, it is important to test whether the family stress model generalizes across different ethnic groups.

### **Family Conflict and Child Internalizing and Externalizing Symptoms**

While Conger et al. (1992, 1993) did not find evidence of a direct association between marital conflict and child outcomes in their study of European American families from rural Iowa, Parke and colleagues (2004) did find a direct association between marital problems and child internalizing and externalizing problems in their study of families from Southern California. The direct association, however, was only significant for the Mexican American families in the sample. For the European American families, the association between marital problems and child adjustment problems was also positive, but not statistically significant. Parke and colleagues posited that marital problems may have a greater impact on Mexican American children (in comparison to European American children) because of the greater interdependence among Mexican family members and the high value placed on family solidarity (*familism*).

Alternatively, the authors also considered that due to their more restricted incomes, the Mexican American families may have lived in tighter quarters than the European American families, rendering parents less able to conceal their marital problems from their children.

In addition to Parke, other studies examining the associations between family conflict, parenting, and child outcomes in Mexican American families have also found some evidence of a direct association between family conflict and child adjustment (Dumka et al., 1997; Gonzales, Deardorff, Formoso, Barr, & Barrera, 2006). Dumka and colleagues (1997), for example, found some support for a direct association between family conflict and adverse child outcomes among Mexican American families. Specifically, 121 low-income Mexican American mothers (78% immigrant) and their children were studied to better understand the associations between family risk (e.g., single parent, mother ever jailed, etc.), family conflict, parenting, and child outcomes (conduct disorder and depression). Findings differed according to whether mother's report—or child's report—of conflict, parenting, and child adjustment were analyzed. When mother's reports were analyzed, there was no significant direct association between family conflict and child outcomes. There was also no significant association between family risk and family conflict. In contrast, when children's reports were analyzed, family conflict was positively and significantly associated with child outcomes. Family conflict was also negatively associated with supportive parenting. The authors posited that the lack of agreement between mother's and children's reports reflect unique experiences of the mother and child (i.e. children may notice and react to events which go unacknowledged by the mother). Notably, there was no significant association between family risk and family conflict.

Similarly, Gonzales et al. (2006) examined the links between acculturation, family conflict, parenting, and adolescent conduct problems and depressive symptoms among 183



Mexican American families. Mothers and their children were assessed on measures of acculturation (language preference), maternal inconsistent discipline, maternal supportive parenting, adolescent conduct problems, and adolescent depressive symptoms. Adolescents' reports of family conflict and mothers' reports of marital conflict and income were also collected. When adolescents' reports were analyzed, the association between family conflict and adolescent depression and conduct problems was significant. When mothers' reports of marital conflict, adolescent depression, and conduct problems were analyzed, the association was also significant. The results from this study suggest that marital conflict and family conflict both directly influence Mexican American adolescent outcomes.

It is difficult to ascertain whether family conflict has a similar direct (versus indirect) influence on African American youth, as there is a lack of research on family conflict and child wellbeing among families of color (Krishnakumar and Buehler, 2000). Of the studies testing the family process model with U.S. families (see Table 1), only three had a significant number of African American families in their sample. Of those three (McLoyd et al., 1994; Mistry et al., 2002; & Conger et al., 2002), two did not include measures of family conflict. Dorsey, Forehand, and Brody (2007) note that African American families have been underrepresented in this research area, in part, because of the disproportionate number of single parent African American households. Thus, if studies have restricted their samples to two-parent households, or to families at risk for divorce, African American families may not be as likely to be included in such studies.

There are, however, some studies that have examined conflict within co-caregiving relationships in African American families. Conger and colleagues (2002), for example, tested the family stress model with 422 two-caregiver African American families. Of these families,

28% of the caregiver dyads were not romantic partners, but rather family members (e.g., the caregiver's mother, aunt, uncle). The direct association between caregiver conflict and child outcomes in this study was significant for two of the three models tested (though not in the direction expected). Specifically, there was a significant positive association between conflict and child's positive adjustment and a significant positive relation between conflict and child's externalizing behaviors. Because these associations were tested in a second phase of the analyses, in which all possible alternative models were fitted, the authors posited that their paradoxical significance was due to model "overfitting," rather than a true association. (Conger et al, 2002).

Because there is mixed evidence for a direct (vs. indirect) association between family conflict and child outcomes, this study tested for both types of associations across the Mexican American, African American, and European American families. Notably, our measure of family conflict is not specific to marital conflict, but rather an assessment of family conflict among all family members. This decision was influenced by family systems theory,<sup>4</sup> which suggests that conflict arising from one family subsystem (parent dyad) can transfer to another family subsystem (parent – child triad), resulting in a more global pattern of family conflict (Cox & Paley, 1997; Minuchin, 1985). Consistent with the family process model, it is expected that the indirect association between family conflict and adolescent outcomes will be significant across all subgroups. In addition, based on the findings of Parke et al. (2004), Dumka et al. (1997), and Gonzalez et al. (2006), a significant direct influence of family conflict on adolescent outcomes for Mexican American families is also expected.

---

<sup>4</sup> Family systems theory is often used to understand how conflict arises in the home environment. Within this framework, the family environment is a hierarchically organized system that encompasses many subsystems, such as dyadic and triadic family relationships. These subsystems are posited to be interconnected and permeable. Thus, conflict arising from one family subsystem can transfer to another family subsystem.

## **Gaining a Better Understanding of the Association Between Income and Maternal Mental Stress: Perceived social support, perceived discrimination, and fear for safety**

Decades of research findings attest that individuals of low socioeconomic status (SES) are more likely than individuals of high SES to experience psychological distress (Belle, 1990; Brown, Bhrolchain, & Harris, 1975; Lorant, Eaton, Philippot, & Ansseau, 2003). Among women, those who live in financially strained circumstances and who have responsibility for young children are more likely than other women to experience symptoms of depression (Belle, Longfellow & Makowsky, 1982). Thus, low SES mothers may not only be at greater risk of experiencing depressive symptoms, they may also be more likely to face a myriad of stressors associated poverty and minority status. Because literature on stress suggests that one's ability to manage a new stressor is reduced by the demands of preexisting stressors (Cohen, Janicki-Deverts, & Miller, 2007), four social stressors (which may be experienced differentially by the four subgroups in this study) are considered in helping understand the association between income-to-needs ratio and family conflict. Specifically, in addition to self-reported depression, the following stressors are considered: lack of social support from family, lack of support from friends, perceived discrimination, and fear for safety. Below, an overview of the literature on these four social stressors is provided.

### **Perceived lack of social support**

Low-income women may be disadvantaged by a lack of effective social support (i.e. instrumental and emotional assistance) to cope with the stressors that accompany economic hardship (Mickelson & Kubzansky, 2003; Turner & Marino, 1994; Schulz et al., 2006). Findings from the National Comorbidity Study, for example, suggest that across ethnic groups, those in the lowest income category (making less than \$20,000/year) report significantly less

emotional support and a greater number of negative interactions with members of their support networks in comparison to participants in higher income categories (Mickelson & Kubzansky, 2003). While anecdotal studies may suggest that low-income individuals are more likely to have an extended kin system of support than those with higher incomes, (due to cultural differences in family cohesiveness; DeAnda, 1984), research suggests that economic disadvantage constrains the availability of social support networks (e.g., lower frequency of contact, less emotional support) due to a scarcity in individual resources and impaired social/coping skills (Belle & Doucet, 2003; Brodsky, 1996). Because the social networks of low-income women are usually composed of other disadvantaged individuals, social networks can be a source of stress rather than support (Belle, 1982; Riley & Eckenrode, 1986; Goodman, Smith, and Banyard, 2010). A study of the costs and benefits of social ties among 314 women, for example, found that women with lower levels of personal resources were more distressed by life events in the lives of their significant others in comparison to women with greater levels of personal resources. Moreover, the mobilization of social support was associated with better psychological well-being for women with greater personal resources, but not for those with lower levels of personal resources (Riley & Eckenrode, 1986).

Emerging research suggests that support from family, versus friends, may differentially impact mental health (Almeida, Subramanian, Kawachi, & Molnar, 2011). Almeida and colleagues recently used data from the PHDCN to test whether the association between family-based (versus friend-based) social support and risk of depression differed among African Americans, foreign-born Mexicans, foreign-born non-Mexican Latinos, U.S. born Latinos, and non-Latino Caucasians. Family support was significantly protective for foreign-born Mexicans and African Americans only. Increased family support was associated with lower likelihood of

depression for Caucasians and for foreign-born non-Mexican Latinos, but the association did not reach statistical significance. Perceived support from friends was associated with significantly lower odds of depression for African Americans and Caucasians, but not for other ethnic/nativity status groups. Moreover, friendship support was only marginally protective in the presence of family support. These findings indicate that family support and friend support may have distinct influences on the risk of depression by ethnic/nativity status. Separate measures of family support and friend support are therefore included in this study. It is hypothesized that the influence of family and friend support will differ across the four ethnic groups in this study.

### **Perceived discrimination**

In addition to the stressors associated with low SES, ethnic and racial minorities are more likely than non-Hispanic whites to experience discrimination (Kessler, Mickelson, & Williams, 1999; Krieger, 1999). The subjective experiences of discrimination and its caustic association with a variety of mental health outcomes (e.g., psychological distress, life satisfaction, self-esteem, personal control, and symptoms of depression) is well established (Brown et al., 2000; Gee et al., 2006; Kessler et al., 1999; Moradi & Risco, 2006; Noh & Kaspar, 2003; Schulz et al., 2000; Williams & Mohammed, 2009). Kessler and colleagues (1999), for example, found that among a national sample of adult Americans, those who reported a high level of day-to-day discrimination (regardless of ethnicity) exhibited twice the odds for major depression and over three times the odds for generalized anxiety disorders versus those who did not report high levels of discrimination.

While there is a growing body of literature on the link between perceived discrimination and psychological distress among African American adults (Landrine & Klonoff, 1996; Kieth, Lincoln, Taylor & Jackson, 2010), few studies have examined the link between perceived

discrimination and psychological distress among Latino adults (Moradi & Risco, 2006; Viruell-Fuentes, 2007). A recent review of the literature published between 2005-2007 on discrimination and health, for example, identified 47 studies focusing specifically on mental health (Williams & Mohammed, 2009). Of those 47 studies, only 4 focused on Latino adults – all of which found a negative association between perceived discrimination and mental well-being. A measure of perceived discrimination is thus included in this study.

### **Fear for Safety**

People with low incomes are also more likely to live in disadvantaged neighborhoods and face daily stressors associated with living in such neighborhoods, such as crime, harassment and danger. Perceptions of the neighborhood environment as violent, unsafe, or highly disordered can increase feelings of distress, both directly and indirectly, through increased feelings of fear and powerlessness (Perkins and Taylor, 1996; Ross and Jang, 2000). The stress imposed by such adverse neighborhood conditions has been found to generate angst above and beyond the effects of the individual's own personal stressors, straining mental health (Hill, Ross, and Angel 2005; Mair, Diez Roux, & Morenoff, 2010; Ross, 2000; Ross and Mirowsky 2001). Hill and colleagues (2005), for instance, used data from the Welfare, Children, and Families project (a household-based, stratified random sample of 2,402 poor mothers in low-income neighborhoods in Boston, Chicago, and San Antonio) to test whether neighborhood conditions influenced women's health over and above individual characteristics. The authors distinguished individual disadvantage from neighborhood problems by including sociodemographic characteristics of individuals (e.g., education, economic well-being, and employment status) that correlate with the likelihood of living in a neighborhood with high levels of disorder and with poor health. Women who lived in neighborhoods where they reported a lot of problems with drugs, crime, abandoned buildings,

unsafe streets, and unresponsive police had significantly worse self-reported health than those who reported more order in their neighborhoods. Notably, the authors found no evidence of subjectivity bias – as people who were more distressed were not likely to report more disorder.

In conclusion, low SES women, particularly mothers, are at greater risk of experiencing psychological distress in comparison to higher income individuals. They are also more likely to be exposed to stressors such neighborhood danger and discrimination in comparison to socioeconomically privileged women. Moreover, the social support networks of low SES women are more likely to be strained and less efficient in providing social support in comparison to the support networks of higher income individuals. Therefore, measures of perceived safety, perceived discrimination, and perceived social support—in addition to self-reported depression—are included in this study. It is hypothesized that inclusion of these four social stressors will better explain the association between income and family conflict, as indicated by an improvement in model fit. However, given the differential influence of family and friend support expected across subgroups (based on Almeida et al., 2011), and possible differences in exposure to social stressors, I hypothesize that the association between the four social stressors and family conflict will differ across subgroups.

### **Possible Sources of Variation in the Link Between Poverty & Social Stressors among 1<sup>st</sup> and 2<sup>nd</sup> Generation Mexican Americans**

As discussed earlier, research indicates that the health outcomes of Mexican American adults may vary by generation status and time spent living in the U.S. (Alegria et al., 2004; Perez et al., 2008; Cook et al., 2009). People raised in a foreign country may experience a dual frame of reference when viewing their contexts, comparing their current living conditions with those in their home countries (Suarez-Orozco & Suarez-Orozco, 2001). Thus, to the extent that Mexican

Americans have lived in more than one context (e.g., immigrants born and raised in Mexico, children of immigrants who spend time in Mexico visiting relatives), there could be differences in the perception of stressors among 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican Americans. Heilemann and colleagues (2002) for example, surveyed 315 low-income women of Mexican descent, and found that the women who had spent their childhood in Mexico before coming to the U.S. reported lower levels of depressive symptoms and more life satisfaction in comparison to the Mexican born women who had lived in the U.S. since childhood (Heilemann, Lee, & Kury, 2002). The authors posited that the women who spent their childhood in Mexico may have had a different source of social comparison than the Mexican women who were raised in the U.S. Women who lived in the U.S. since childhood may have perceived themselves as disadvantaged compared with other American women.

Qualitative studies with Mexican Americans suggest that more recent immigrants feel hopeful about the life possibilities for their families (Bacallao & Smokowski, 2007; Viruell-Fuentes, 2007). This optimism, however, seems to fade with greater time in the U.S. (Escobar, 2006; Viruell-Fuentes, 2007). Bacallao and Smokowski (2007) for example, conducted qualitative interviews with twelve undocumented Mexican families and found that these immigrant families considered the most basic living conditions in the U.S. a marked improvement in comparison to the chronic poverty they endured in Mexico. A common theme voiced by parents during these interviews was the goal of getting their children ahead by educating them in the U.S. and having them learn English. This goal kept parents motivated and able to endure immigration – related difficulties. Interestingly, happiness was not a goal mentioned by these families. In fact, these families were prepared for just the opposite. One mother is quoted as saying,



*I didn't come here to become rich. I didn't even come here to become happy, no. I came here to get my children ahead. I tell my children we came here for them, and to become better persons. We work like burros here. This is not a happier life.* (Bacallao & Smokowski, 2007, p.55).

To the extent that immigrant mothers feel their circumstances in the U.S. are better than they were in Mexico, and to the extent that immigrant mothers are motivated by the hope of seeing their children do well in the U.S., these mothers' mental well-being may not be as affected by the risk factors that may affect the mental well-being of mothers from 2<sup>nd</sup> generation households.

Additionally, recent immigrants may live in neighborhoods consisting of other recent immigrants, thereby limiting their exposure to possible messages of discrimination. Viruell-Fuentes (2007) documented the differential experiences of 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican immigrant women in her qualitative study of 40 women in Southeastern Michigan. The author noted that the second generation experienced greater exposure to "othering" and discrimination than the first generation. Moreover, among the first generation women, those who regularly ventured outside of their neighborhood into surrounding suburbs reported more perceived racial encounters, "I wouldn't go to a restaurant where White people go. I couldn't go there, I feel humiliated when they look at you like that—ugly" (p. 1528). Findings from a nationally representative sample of Latinos corroborate that U.S. born Latinos and Latinos arriving to the U.S. at younger ages are more likely to perceived discrimination compared to Latino immigrants arriving at later ages (Perez, Fortuna, and Alegria, 2008). Thus, it is possible that Mexican American mothers from 1<sup>st</sup> generation households may perceive less social stressors in comparison to the Mexican American mothers from 2<sup>nd</sup> generation households. Moreover, to the extent that more recent immigrants are more hopeful about their prospects, stressors may not influence family conflict to the same degree.

## **Neighborhood Characteristics:**

### **A Link Between Income-to-Needs Ratio and Mental Health Stress?**

Families with limited incomes are limited in where they can afford to live, as the neighborhood in which a family resides is determined—to some degree—by a family's demographic profile (Massey & Fischer, 2000; Massey, Gross, & Eggers, 1991). A strong body of literature suggests that neighborhood context may impact individual and family outcomes above and beyond individual characteristics (Aneshensel & Sucoff, 1996; Cutrona et al., 2005; Leventhal & Brooks-Gunn, 2000; Massey et al., 1991; Sampson, Raudenbush, & Earls, 1997). Hence, the third research question in this study examines whether neighborhood context helps explain the association between income-to- needs ratio and maternal mental health stress (as indicated by self-reported depression, lack of family support, lack of friend support, fear for safety, and perceived discrimination). The most frequently used objective indicators of neighborhood context—concentrated poverty, immigration concentration, and residential stability—are examined in this study.

Social disorganization theory suggests that neighborhoods with a high proportion of poor residents, high residential mobility, and/or high ethnic heterogeneity are disadvantaged in comparison to other neighborhoods, as these characteristics are hypothesized to weaken residents' attachment to the neighborhood and limit resources with which to support local institutions (Shaw & McKay, 1969). These conditions, in turn, are posited to weaken social ties among neighbors, promote psychological withdrawal from the community, and allow for social disorder to emerge (Massey & Denton, 1993; Wilson, 1987; Sampson, Raudenbush, and Earls, 1997). Despite the appeal of social disorganization theory, however, the empirical evidence for

independent, neighborhood-level influences of concentrated poverty, residential mobility, and ethnic heterogeneity on individual outcomes is inconsistent (as discussed below).

### **Concentrated poverty**

Concentrated poverty is the core measure of economic disadvantage in neighborhoods (Wilson, 1987; Massey, 1996). Although there is a growing body of research on neighborhood poverty and health (Browning & Cagney, 2002; Wen, Browning, & Cagney, 2003; Yen & Kaplan, 1999), the evidence of a significant association between neighborhood concentrated poverty and mental well-being is far from conclusive. While some studies do find a link between neighborhood disadvantage and indicators of mental health (Cutrona et al., 2005; Galea et al., 2007; Ross, 2000), other studies find that the link is attenuated once individual-level characteristics are taken into account (Henderson et al., 2005; Klebanov, Brooks-Gunn, & Duncan, 1994).

Galea and colleagues (2007), for example, conducted a random-digit-dial telephone survey of residents of New York City, following up at 6 and 18 months. Multilevel analyses of the 1,120 participants in the study showed that among those who had no history of depression, residents of poorer urban neighborhoods had more than twice the odds of depression during an 18-month period of follow-up relative to residents of neighborhoods of higher SES, independent of individual-level risk factors for depression, including individual income. Similarly, Cutrona et al. (2005) conducted a multilevel analysis of the associations between neighborhood disadvantage, negative life events, and the onset of major depression among 720 African American women of varied socioeconomic backgrounds. Neighborhood disadvantage (e.g., percentage of residents below the poverty line) was significantly associated with recent onset of depression, even after controlling for individual-level characteristics.

Other studies, however, don't find associations between neighborhood context and adult mental health outcomes once individual risk factors are controlled. Henderson et al. (2005), for example, conducted multilevel analysis with data from 3,437 adults and found that the association between neighborhood socioeconomic characteristics and adult depressive symptom scores was weak and inconsistent once individual-level factors were taken in to account. Differences in the assessment of depressive symptoms and neighborhood disadvantage across studies may be contributing to discrepancies in findings.

### **Residential stability**

Residential stability has been posited to contribute to social cohesion and has been negatively associated with psychological distress (Aneshensel and Sucoff, 1996; Schieman, 2005). Aneshensel and Sucoff (1996) for example, found a significantly positive association between perceptions of neighborhood ambient hazards (i.e. safety, crime, property damage) and adolescent internalizing and externalizing symptoms. Specifically, the authors tested whether neighborhood structural properties (SES, ethnic composition, residential stability; garnered from census data) and subjective indicators of the neighborhood (ambient hazards, social cohesion; from adolescent report) were associated with adolescent depression, anxiety, conduct disorder, and oppositional defiant disorder in a community based sample of 877 adolescents in Los Angeles County. Stepwise regression analyses revealed a negative association between residential stability (percentage of households in the neighborhood for at least five years) and adolescent perceptions of ambient hazards, independent of the SES and racial characteristics of the neighborhood. Perceptions of ambient hazards, in turn, were positively associated with depression, anxiety, oppositional defiant disorder and conduct disorder.

In addition, residential stability has also been associated with perceived social support. Turney and Harknett (2010) recently analyzed longitudinal data from 4,211 participants in the Fragile Families and Child Wellbeing survey, and found that—regardless of neighborhood SES—residential stability (years lived in current neighborhood) was positively associated with perceived instrumental support. The authors posited that residential stability may allow residents living in the same place for longer periods of time to have more opportunities to interact and exchange with their neighbors. The possibility that supportive social networks may decrease the desire to move was also acknowledged.

Rather than being indicative of personal preference, however, some argue that residential stability may instead represent residents' financial inability to *move out* of a neighborhood (Anderson 1990; Warner and Pierce, 1993). Indeed, some studies have found that the association between residential stability and individual outcomes depends on the SES and racial composition of the neighborhood (Browning & Cagney, 2003; Guest, Cover, Matsueda, & Kubrin, 2006; Schieman, 2009). Warner and Rountree (1997), for example, analyzed census data from 100 Seattle neighborhoods and found that residential stability was positively associated with burglary in high poverty communities. Moreover, they found that neighborhood ethnic composition moderated the association between social ties and crime, where social ties were associated with lower crime rates in white neighborhoods, but not associated with crime rates in predominately mixed or predominantly minority neighborhoods. Similarly, Schieman (2009) surveyed 1,138 older adults (over the age of sixty-four years) to examine the associations of residential stability and neighborhood racial composition on residents' report of neighborhood problems (e.g., noise, vandalism, crime). Regression analyses revealed that for white respondents, residential stability was associated with lower levels of perceived neighborhood problems – but only if they resided

in areas with fewer than 25% black residents. Whites living in residentially stable neighborhoods that also contained a high percentage of black residents reported higher levels of neighborhood problems. This association remained significant even after controlling for individual and neighborhood level characteristics.

### **Immigrant concentration**

Although social disorganization theory suggests that a high proportion of immigrants would increase crime by destabilizing communities (e.g., contributing to neighborhood levels of poverty, mobility, and heterogeneity), recent research indicates that immigrant concentration is negatively or insignificantly associated with crime (Feldmeyer, 2009; Martinez, 2002; Martinez and Lee, 2000; Reid, Weiss, Adelman, & Jaret, 2005; Sampson, 2008; Sampson, Morenoff, & Raudenbush, 2005). Sampson and colleagues (2005), for example, analyzed data from 2,974 PHDCN participants (living in 180 Chicago neighborhoods) to examine which individual, family, and neighborhood factors were significantly associated with the odds of perpetrating violence. Analyses revealed that, accounting for an individual's immigrant status, residents in neighborhoods with 40% or more immigrants were 20% less likely to commit a violent act than residents in immigrant free neighborhoods. Similarly, Feldmeyer & Darrel (2009) found that, net of controls, immigrant concentration slightly reduced White and Black homicide offending and had no significant impact on Latino homicide offending. Moreover, Feldmeyer's (2009) SEM analysis of California Arrest Data and New York Arrest Data revealed that while immigrant concentration contributed to Latino violence by increasing language heterogeneity, it simultaneously reduced violence by reducing the presence of female-headed households and the burden of care among Latino populations, ultimately resulting in a slightly negative association with violence.

A different perspective on immigrant concentration is that an immigrant presence may have some protective or buffering effects against social problems by increasing attachments to the labor force, promoting traditional family structures, and fostering community resources and services (Martinez, 2002; Portes & Rumbaut, 2006). Feldmeyer's (2009) study of Latinos, for example, found that places with higher Latino immigration tended to have relatively fewer Latina-headed families with children, fewer unemployed males, and a lower Latino burden of care, net of controls.

### **Do neighborhood characteristics influence subgroups differently?**

Emerging research suggests that neighborhood characteristics may influence subgroups differently. For example, Brunton-Smith and Sturgis (2011) recently conducted multilevel analysis with data from the British Crime Survey and the U.K. decennial census (102,133 individuals residing in 5,196 neighborhoods) and found that socioeconomic disadvantage, ethnic diversity, and residential mobility each had independent and positive associations with individual-level fear of crime. The degree of fear expressed by respondents varied systematically as a function of the ethnic diversity of their neighborhood, where Whites living in more ethnically diverse neighborhoods reported greater levels of fear in comparison to Whites living in less diverse neighborhoods. Conversely, Blacks living in more ethnically diverse neighborhoods reported lower levels of fear in comparison to Blacks living in more homogeneous neighborhoods. Frank, Cerda, & Rendon (2007) also found differential neighborhood influences by subgroup when examining the health risk behaviors of adolescents in Los Angeles. Second generation Latino adolescents living in *above*-county-average Latino neighborhoods had significantly higher odds of substance use and delinquency than did second generation Latino adolescents living in *below*-county-average Latino neighborhoods, net of

individual characteristics. In contrast, residence in *above*-county-average Latino neighborhoods was not associated with greater odds of health risk behaviors among first generation Latino adolescents. Frank, Cerda, & Rendon's finding indicates that residence in an ethnic enclave may be a risk factor for the children of immigrants, but not for immigrants themselves.

This chapter has served to provide an overview of the literature on: (1) the importance of generational status in researching Mexican American families, (2) the family stress model, (3) the model's generalizability to different subgroups, (4) social stressors associated with income, and (5) neighborhood characteristics associated with social stressors.

Based on the literature reviewed, I hypothesize that the associations between income-to-needs ratio, maternal depression, family conflict, parenting, and child outcomes will differ for 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican American families. The associations should be similar, however, for the 2<sup>nd</sup> generation Mexican American, African American, and European American families. In addition, based on the finding by Parke et al (2004), I expect that family conflict will have a direct association on adolescent outcomes for Mexican American families only. Further, it is expected that inclusion of the four social stressors of interest (lack of family support, lack of friend support, discrimination, fear for safety) will help explain the association between income-to-needs ratio and family conflict. However, I expect their influence on family conflict to differ across subgroups. Finally, neighborhood characteristics (concentrated poverty, immigrant concentration, & residential stability) should help explain the association between income-to-needs ratio and social stressors. However, the influence of neighborhood characteristics is expected to vary by subgroup, as illustrated previously by Feldmeyer (2009) and Frank et al., 2009. The next section presents the method and results of this study.



## **Method**

### **Design and Sample**

This study used data from the Project on Human Development in Chicago Neighborhoods (PHDCN). PHDCN is a multilevel, longitudinal study designed to investigate how family, school, and neighborhood contexts affect child and adolescent development. Participants were drawn from a probability sample designed to capture the ethnic and socioeconomic diversity of Chicago's neighborhoods. Data for 847 census tracts (from the 1990 U.S. Census) comprising the city of Chicago were combined to create 343 neighborhood clusters which included two to three census tracts (approximately 8,000 residents). A stratified probability sample of 80 neighborhood clusters (cross-classified by racial/ethnic composition and SES) was then drawn from the 343 neighborhood clusters.

Within the 80 target neighborhood clusters, approximately 1,000 children within each of seven age cohorts (birth, 3, 6, 9, 12, 15, and 18 years) were sampled from randomly selected households (N=6,226). Home-based interviews and assessments were conducted with youth and their primary caregivers over the course of 6 years, at three different time periods (1994, 1997, and 2000) at roughly 2 ½ -year intervals. The final response rates were 75%, 86%, and 77% at waves 1, 2, and 3, respectively (Martin & Schoua-Glusberg, 2002). Reflective of the demographics of Chicago, the PHDCN dataset includes substantial numbers of Latino immigrants and native born Latinos.

The current study used data on children from cohorts 6, 9, 12, and 15 (i.e., those who were 6, 9, 12 or 15 years of age at Wave 1; N=3,302). Respondents who were not the child's biological mother (n = 523) or were missing information as to their relationship to the child (n = 7) were excluded from the sample. Mothers who did not identify as African American, European

American, or Mexican American were excluded from the sample ( $n = 503$ ). Foreign born Black mothers ( $n = 29$ ), foreign born White mothers ( $n = 89$ ), mothers who were missing birth country information ( $n = 19$ ), and U.S. born Mexican American mothers ( $n = 107$ ) were also excluded from the sample. Thus, the focus in this study was on the African American, European American, first generation Mexican American, and second generation Mexican American families who were interviewed at wave 1 ( $n = 2025$ ; see Table 2 for descriptive statistics). Of these, 1,534 families were seen 2 ½ years later at wave 2. Chi square tests (on demographic characteristics such as gender, age, family structure, maternal self-reported depression, maternal education, and ethnicity) indicated that families who were seen at wave 2 did not differ from those who were not with regards to maternal education, gender, cohort, or maternal depression. There were, however, more two-parent families than expected at Wave 2 (52% at wave 2 versus 48% at wave 1). There were also less African American families than expected at Wave 2 (40% at wave 2 vs. 43.5% wave 1). Full estimation maximum likelihood (FIML) method (discussed in greater detail below) was used in all analyses.

## Measures

At wave 1, a demographic and cultural information interview was administered to the primary caregiver. Family demographic information such as education, income, and marital status was obtained. Information was also collected relevant to race/ethnicity and birth country. In addition, the primary caregiver and child completed structured interviews, self-report questionnaires, and educational tests assessing a range of health, cognitive, and behavioral indicators at waves 1, 2, and 3. The items, means, and standard deviations for the independent variables of interest are presented in Table 3. Correlations among all variables of interest are presented in Table 4.

### **Indicator of poverty**

***Income-to-needs ratio.*** Total annual family income and family size at Wave 1 were used to create an income-to-needs ratio. The family income-to-needs ratio was created by dividing the reported total annual family income by the official poverty threshold for the respective household size in 1995. An income/needs ratio of 1 or less signifies poverty status. Lower family income has been used as a proxy for economic pressure (Lee et al., 2009). In the present sample, the mean income-to-needs ratio was 1.58 ( $SD=1.26$ ), with significant variation across subgroups (see Table 2).

### **Social Stressors**

Measures of social stressors (perceived discrimination, fear for safety, lack of social support) were constructed from data that was collected at wave 1. Indicators were drawn from the demographic questionnaire, Exposure to Violence interview, and the Provision of Social Relations instrument.

***Perceived discrimination.*** Three questions from the demographic questionnaire were used to construct a measure of perceived discrimination. At wave 1, mothers were asked: (a) “How often do people dislike you because of your ethnic group or race?” (b) “How often are you treated unfairly at school or work because of your ethnic group or race?” and (c) “How often have you seen friends treated badly because of their ethnic group or race?” Mothers indicated the extent to which each item described their experience on a 3-point scale (1 = *never*, 2 = *sometimes*, 3 = *often*). Items were recoded into dichotomous variables such that a response of *sometimes* or *often* was given a score of ‘1’ (*never* = 0). Responses were summed across items so that higher scores were indicative of greater perceived discrimination. Internal consistency of these three

items was adequate (Cronbach's  $\alpha = .71$ ). Mean perceived discrimination for this sample was 1.47 ( $SD=1.16$ ).

***Perceived lack of safety.*** Three questions from the Exposure to Violence interview were used to construct a measure of perceived lack of safety. At wave 1, mothers were asked about their fear in certain situations and their exposure to several different types of violent acts. Response options for each question were dichotomous (0 = *no*; 1 = *yes*). Sample items include the following: (a) “are you afraid child may be hurt by violence in neighborhood?” and (b) “are you afraid child may be hurt by violence in front of house?” The three items were summed so that higher scores indicated greater lack of safety. The internal consistency for these items was adequate (Cronbach's  $\alpha = .73$ ). Mean perceived lack of safety for this sample was 1.67 ( $SD=1.19$ ).

***Lack of social support from family.*** The Provision of Social Relations (PSRP) instrument assessed the social support received by the primary caregiver from family and friends. Five items assessed support from family members specifically. Items were rated on a 3-point scale (1 = *very true*, 2 = *somewhat true*, 3 = *not true*). Sample items include the following: (a) “No matter what happens, I know that my family will always be there for me should I need them” and (b) “People in my family have confidence in me.” Items were summed such that higher scores indicated greater lack of support ( $M= 7.88$ ,  $SD=2.29$ ). The internal consistency for these items was good (Cronbach's  $\alpha = .79$ ).

***Lack of social support from friends.*** Six items from the Provision of Social Relations (PSRP) instrument assessed the primary caregiver's perceived support from friends. Sample items include: (a) “When I am with my friends I feel completely able to relax and be myself” and (b) “I have at least one friend that I could tell anything to.” Items were rated on a 3-point scale (1 = *very true*, 2 = *somewhat true*, 3 = *not true*). Items were summed such that higher scores

indicated greater lack of social support from friends ( $M=13.09$ ,  $SD=3.46$ ). These six items demonstrated adequate internal consistency (Cronbach's  $\alpha=.76$ ).

***Self-reported depressive symptoms.*** An item assessing whether the mother suffered from symptoms of depression was drawn from the Family Mental Health & Legal History interview. At wave 1, mothers were asked, “Has anyone mentioned ever suffered from depression, that is, they have felt so low for a period of at least two weeks that they hardly ate or slept, or couldn’t work or do whatever they usually do?” Five hundred fifteen mothers affirmed that someone in the family fit this description; 223 mothers indicated that they were the ones that suffered from such a condition. Mothers who indicated they suffered from depressive symptoms received a score of 1.

### **Family Conflict**

Family conflict was assessed using the conflict subscale of the Family Environment Scale (FES; Moos, 1994), which was administered to primary caregivers at wave 1. Caregivers reported whether each of 5 statements accurately described their families (e.g., “Family members often criticize each other;” (0=*False*, 1=*True*). Responses were summed across items, such that higher scores indicated greater conflict ( $M=1.18$ ,  $SD=1.40$ ). Research supports the construct, concurrent and predictive validity of the FES (Moos, 1990). In the present study, the FES conflict scale demonstrated adequate internal consistency ( $\alpha=.70$ ). Similar alpha levels have been reported by other studies of Latino families of varying acculturation levels using this measure (see Miranda, Estrada, & Firpo-Jimenez, 2000).

### **Parenting**

Following the recommendation by Mistry et al. (2002), this study examined both positive and negative parenting interactions (maternal warmth and maternal aggression, respectively).

The warmth and praise subscales from the Home and Life Interview, administered at wave 1, were used to assess maternal warmth. The items for this subscale were collected via interviewer observation of maternal behaviors directed towards the child during a home observation visit. Items used to assess maternal aggression were drawn from the Conflict Tactics Scale (CTS) administered to mothers at Wave 1. The CTS asked if any of several different ways of settling problems with the child were used by the mother in the past year.

**Warmth.** Seven items, based on interviewer report, made up the warmth scale. Interviewers reported whether they witnessed certain interactions between mother and child during a home visit (e.g., “mother voices positive feelings to child?” options: 0=*no*: 1=*yes*). The seven items demonstrated adequate internal consistency ( $\alpha = .74$ ) in this sample. A previous test of measurement equivalence and differential item functioning indicates this subset of items functions equivalently for Latino, African American and European American children (Bingenheimer, Raudenbush, Leventhal, & Brooks-Gunn, 2005). Mean warmth for this sample was 5.65 ( $SD=1.66$ ).

**Maternal aggression.** Six items assessing psychological aggression towards the child were drawn from the Conflict Tactics scale. Mothers were asked how many times they had behaved in a certain manner when there was a problem with the child (e.g., “In the past year, when having a problem with child, how many times has adult insulted/swore at child?” options: 0=*never*; 1=*once*, 2=*twice*, 3=*3-5 times*, 4=*6-10 times*; 5=*11-20 times*; 6=*more than 20 times*). The responses to the six items were summed ( $\alpha = .70$ ). Mean adult-to-child aggression was 6.80 ( $SD=6.34$ ).

### **Adolescent Internalizing & Externalizing Behaviors**

Measures of adolescent internalizing and externalizing behaviors were drawn from a modified version of the Child Behavior Checklist (CBCL; Achenbach, 1991), which parents completed at Wave 2. Mothers were asked to report how true each behavior was of their children during the past 6 months on a 3-point scale, (0=*not true*; 1=*somewhat true*; 2=*very true*). The CBCL produces a total problems score, internalizing and externalizing problem scores, and six narrowband subscores. The internalizing subscale raw score and the externalizing subscale raw score were used in this study. The internalizing subscale includes items that address anxious/depressed behaviors, withdrawn behaviors, and somatic complaints. The externalizing subscale is comprised of items that address aggressive and delinquent behaviors. Higher scores indicate more problems. The average internalizing and externalizing raw scores for this sample at wave 2 were  $M=9.01$  ( $SD=7.76$ ) and  $M=7.97$  ( $SD=6.73$ ), respectively. Adequate reliability and validity of the CBCL have been demonstrated with children of diverse ethnic and socioeconomic backgrounds (Achenbach, 1991).

### **Demographics**

The following characteristics were controlled for in all analyses: child gender (1=*male*), household structure (1 = *two biological parents married, at home*, 0 = *all other family structures*), maternal education (1= *less than high school* to 5= *Bachelor's degree or more*), and child's age at wave 1.

### **Neighborhood-level characteristics**

Neighborhood-level measures of concentrated poverty, residential stability, and immigrant concentration were developed by Sampson, Raudenbush, and Earls (1997) using 1990 census data. The three measures were derived from a factor analysis of the 343 clusters in

Chicago. Concentrated poverty is factor consisting of five items: (1) percentage of households that were below the poverty line, (2) percentage of residents in receiving public assistance, (3) percentage of unemployed residents, (4) percentage of female-headed household, and (5) density of children. Immigrant concentration is a factor that reflects neighborhood differences in immigration and Latino population. This factor is made up of two items: (1) percentage of immigrant residents and (2) percentage of Latino residents. Residential stability included the percentage of residents living in the same house as five years earlier and the percentage of owner-occupied homes (see Sampson et al., 1997 for more information).

Before conducting path model analysis, all variables were rescaled into a proportion of maximum scale (POMS) as recommended by Little (2010). This (POMS) puts all variables on a similar metric with a meaningful mean. Two steps were used to convert all variables to POMS: first, the minimum was subtracted from each scale such that all scales ranged from 0 to M (e.g., if a scale goes from 1 to M, 1 must be subtracted so that 0 is the minimum value on the scale). Second, the score was divided by M, where M is the maximum observed score.

### **Analytic Strategy**

#### **Treatment of Missing Data**

Less than 5% of cases were missing data on each control variable, but roughly 24% of the cases were missing data on externalizing and internalizing behaviors at wave 2 (due to sample attrition). The full information maximum likelihood (FIML) method, which estimates model parameters and standard errors using all available raw data (Enders, 2001), was used for all analyses. FIML has been shown to be more effective compared to other estimation approaches when dealing with missing data in structural equation models (Enders & Bandalos, 2001) and precluded the need for imputation or the deletion of incomplete cases. This approach to handling



missing data is preferable to deletion of cases, which results in both the loss of potentially valuable information and reduced statistical power (Schafer & Graham, 2002).

### **Analyses**

To test for significant differences across groups on variables of interest, chi square tests and analysis of variance (ANOVA) were conducted using SPSS 16. Chi square tests were used to test for mean differences on categorical variables (e.g., maternal education, gender). One-way ANOVAs with post-hoc tests were used to test for group mean differences on continuous variables (e.g., income-to-needs ratio, lack of family support, etc.). In order to determine which post-hoc procedure to use, variance and groups sizes were considered. For variables which violated the homogeneity of variance assumption - as indicated by a significant Levene's statistic- the Games-Howell post-hoc procedure was used. For variables which did not violate the homogeneity of variance assumption, Hochberg's GT2 post-hoc procedure was used. Both the Games-Howell and Hochberg's GT2 post-hoc procedures are recommended for use when sample sizes differ considerably (Field, 2005).

Path models in Mplus 6.0 (Muthen and Muthen, 2010) were used to address this study's research questions. To account for the nested structure of our data, maximum likelihood estimator with robust standard errors (MLR estimation) and the CLUSTER command were used. MLR estimates are robust to non-normality and non-independence of observations. The cluster procedure adjusts standard errors, giving more conservative parameter estimates. This was necessary given the non-independence of observations in nested data.

Model fit was assessed using  $\chi^2$  fit statistics, the root mean square error of approximation (RMSEA; Browne & Cudek, 1993), the standardized root mean square residual (SRMR) and the comparative fit index (CFI; Bentler, 1990). The model  $\chi^2$  tests the null hypothesis that the

theorized model is correct, where  $\chi^2 = 0$  indicates the model fits the data perfectly (the predicted covariances = the observed covariances). Thus, a non-significant  $\chi^2$  indicates a model fits the data well. The  $\chi^2$  statistic, however, is affected by sample size, and larger sample sizes (400 cases or more) may lead to a significant  $\chi^2$  even though the differences between the observed and predicted covariances are modest (Kline, 2005). Because the  $\chi^2$  statistic is sensitive to both sample size and model complexity, the  $\chi^2$  ratio ( $\chi^2 / df$ ), which adjusts for model complexity is reported. In general a  $\chi^2$  ratio between 1 and 3 indicates good fit (Arbuckle & Wothke, 1999). The RMSEA, SRMR, and the CFI were also examined. The RMSEA, like the  $\chi^2$  index, is an absolute index of fit, where a value of zero indicates best fit. Unlike the  $\chi^2$  index, however, the RMSEA includes a built-in correction for model complexity. A general guideline for interpreting RMSEA values is that values of .05 or less indicate close approximate fit, values between .05-.08 indicate reasonable fit, and values between .08 - .10 reflect poor fit (Browne & Cudeck, 1993). A 90% confidence interval (CI) for RMSEA reflects the degree of uncertainty associated with RMSEA at the 90% level of statistical confidence. Because .05 is the cut-off for close approximate fit, a confidence interval which includes .05 does not allow us to reject the null hypothesis of poor approximate fit. Thus, an ideal confidence interval will have 0 as the lower bound and a number less than .05 as the upper bound. Another “badness-of-fit” index, the SRMR is a measure of the overall difference between the observed and predicted correlations. SRMR values of less than .08 are favorable (Hu & Bentler, 1998). In contrast to the  $\chi^2$ , RMSEA, and SRMR, the CFI is a relative fit index, which assess the improvement in fit of the theorized model in comparison to a baseline (or null) model which assumes zero covariances (unrelated variables). Values greater than .90 indicate reasonably good model fit. These four indices were considered when assessing the fit of each model tested. As discussed, conventional guidelines

suggest that when a model fits the data well, the  $\chi^2$  will be non-significant, the  $\chi^2$  ratio will be between 1 and 3, the SRMR will be less than .08, the RMSEA will be .05 or less, and the CFI will be close to one (Bentler, 1990; Kline, 2005).

Analyses for each research question proceeded in two general steps: first, two competing models were compared. If the competing models were nested (variables in the two models are the same, but paths differ) a chi-square difference test with the Satorra-Bentler scaled chi-square<sup>5</sup> (Satorra & Bentler, 1999) was used to determine the preferred model. If competing models were not nested (i.e. variables in the two models are not the same), their relative fit indices and Akaike information criterion (AIC) were compared. Second, the paths of interest in the preferred model were constrained to be equal across groups. The Satorra-Bentler scaled chi-square test was then conducted to test for subgroup differences.

To answer the first question (see Figure 2), a path model depicting the family process model *without* a direct path between family conflict and child outcomes (Model 1a, where the direct path from family conflict to child outcomes is theoretically constrained to 0) was compared to a path model *with* a direct path from family conflict to child outcomes (Model 1b) using the chi-square difference test with the Satorra-Bentler scaled chi-square. Two steps were needed to compute the Satorra-Bentler scaled chi-square difference test ( $TR_d$ ) in Mplus using the MLR chi-square. First, the difference test scaling correction ( $c_d$ ) was computed (see equation 1)

$$(1) \ c_d = [(d_0 * c_0) - (d_1 * c_1)] / (d_0 - d_1)$$

where  $d_0$  is the degrees of freedom in the nested model,  $c_0$  is the scaling correction factor for the nested model,  $d_1$  is the degrees of freedom in the comparison model,  $c_1$  is the scaling correction

---

<sup>5</sup> The chi square difference test:  $\Delta\chi^2 = \chi^2(A) - \chi^2(B)$ , with  $\Delta df = df(A) - df(B)$  assumes that  $\Delta\chi^2$  follows a chi-squared distribution. However, the difference between two scaled chi-squares is not distributed as chi-square if the data is nested/multi-level. When data is multi-level, the Satorra Bentler Scaled Chi Square should be used (see <http://www.statmodel.com/chidiff.shtml>).

factor for the comparison model. Then, the Satorra-Bentler scaled chi-square difference test was computed (see equation 2)

$$(2) \text{ TR}_d = [(T_0 * c_0) - (T_1 * c_1)] / (c_d)$$

where  $T_0$  is the MLR chi-square values for the nested model,  $c_0$  is the scaling correction factor for the nested model,  $T_1$  is the MLR chi-square values for the comparison model, and  $c_1$  is the scaling correction factor for the comparison model. A non-significant  $\Delta\chi^2$  indicates that the constrained model fits the data just as well and is more parsimonious than the unconstrained model. A significant  $\Delta\chi^2$  indicates that the constrained model fits the data significantly worse than the unconstrained model. We then constrained the paths of interest to be equal across subgroups and conducted another Satorra-Bentler scaled chi-square difference test to see whether the model fit equally well across groups.

To answer the second question, four social stressors of interest (perceived discrimination, fear for safety, lack of family support, and lack of friend support) were added to the final model from question 1 (see Figure 3). The fit indices of the resulting model were then compared to the final indices of the final model from question 1. To test whether the model fit equally well across groups, the paths of interest were constrained and another Satorra-Bentler scaled chi-square difference test was conducted. The third question was answered in the same manner as the second question (see Figure 4).

## Results

Demographic and descriptive information on the sample is reported in Table 2. Nearly forty-percent of the sample was Mexican American ( $n=787$ ) and 43% of the sample was African American ( $n = 881$ ). Fifty-one percent of the children were female ( $n = 1029$ ). A quarter of the

mothers had less than a high school education ( $n = 502$ ). Nearly half of the households in this study consisted of families in which both biological parents of the child were married to each other ( $n = 980$ ). Chi square tests revealed significant differences in family structure ( $p = .000$ ), maternal education ( $p = .000$ ), and maternal self-reported depression ( $p = .004$ ) between groups.

Groups also differed significantly in income-to-needs ratio ( $p = .000$ ), with first generation Mexican American families having the lowest mean income-to-needs ratio ( $M = 0.8$ ,  $SD = 0.6$ ) and European American families reporting the highest ( $M = 2.7$ ,  $SD = 1.3$ ; see Table 2). On average, African American mothers perceived significantly more discrimination ( $M = 1.7$ ,  $SD = 1.2$ ) in comparison to Mexican American mothers from 1<sup>st</sup> ( $M = 1.2$ ,  $SD = 1.1$ ) and 2<sup>nd</sup> generation ( $M = 1.3$ ,  $SD = 1.1$ ) households and European American mothers ( $M = 1.3$ ,  $SD = 1.1$ ). Mexican American mothers from 1<sup>st</sup> generation households reported greater fear for safety ( $M = 2.1$ ,  $SD = 1.1$ ) than African American ( $M = 1.6$ ,  $SD = 1.2$ ) and European American ( $M = 1.2$ ,  $SD = 2.1$ ) mothers. While Mexican American mothers, on average, reported less lack of support from their families in comparison to African American and European American mothers, they reported more lack of support from friends. There were also significant differences in reports of family conflict, with first generation Mexican American families having the lowest mean family conflict scores ( $M = 0.7$ ,  $SD = 1.6$ ) and African American families reporting the highest ( $M = 1.4$ ,  $SD = 1.5$ ). While there were no significant differences in average levels of warmth between 1<sup>st</sup> generation Mexican American families ( $M = 5.4$ ,  $SD = 1.7$ ), 2<sup>nd</sup> generation Mexican American families ( $M = 5.6$ ,  $SD = 1.7$ ), and African American families ( $M = 5.6$ ,  $SD = 1.7$ ), their warmth scores were significantly lower than European American families ( $M = 6.1$ ,  $SD = 1.4$ ). African American families and European American families reported more parent-to-child aggression than Mexican American families of 1<sup>st</sup> and 2<sup>nd</sup> generation. With regards to child

outcomes, African American children had significantly higher mean externalizing scores ( $M = 9.6, SD = 6.9$ ) than 1<sup>st</sup> generation Mexican American children ( $M = 6.2, SD = 6.0$ ), 2<sup>nd</sup> generation Mexican American children ( $M = 6.8, SD = 6.5$ ), and European American children ( $M = 7.6, SD = 6.4$ ). European American children had significantly lower mean internalizing scores ( $M = 7.7, SD = 7.2$ ) than 1<sup>st</sup> generation Mexican American children ( $M = 10.3, SD = 7.2$ ) and 2<sup>nd</sup> generation Mexican American children ( $M = 9.8, SD = 7.9$ ), but not significantly lower than African American children ( $M = 8.6, SD = 8.0$ ). For greater detail on all the significant differences between subgroups, see Table 2.

For the most part, variables of interest were significantly correlated with each other, though some only to a modest degree (see Table 4). As expected, income-to-needs ratio was negatively associated with lack of family support, lack of friend support, and fear. Its association with maternal depression, though negative, did not reach significance. Maternal depression and all social stressors (except for lack of friend support) were positively associated with family conflict. As expected, family conflict was positively correlated with maternal aggression and negatively related to warmth. Family conflict and adolescent internalizing and externalizing behaviors were positively associated. Warmth was negatively related child outcomes, though to a lesser degree. Neighborhood-level variables were all associated with income-to-needs ratio in the expected direction. Although neighborhood-level variables were not associated with maternal depression, they were significantly associated with all social stressors, to varying degrees.

Comparison of the first set of path models (shown in Figure 2) indicated that while both the indirect effects model (model 1a) and the direct effects model (model 1b) demonstrated adequate model fit, model 1b fit the data better (see Table 5). A significant  $\Delta\chi^2$  test of the nested models confirmed that model 1a (with direct effect theoretically = 0) fit the data significantly

worse than model 1b ( $\Delta\chi^2 = 80.38$ ,  $df = 8$ ,  $p = .000$ ). To test whether model 1b fit equally well across Mexican American, African American, and European American households, the paths of interest were fixed to be equal across groups (model 1c). Surprisingly, the  $\Delta\chi^2$  test was not significant ( $\Delta\chi^2 = 32.02$ ,  $df = 33$ ,  $p = .516$ ), indicating that the constraint placed on parameters to be equal across groups did not result in significantly worse model fit. Thus, the associations between the variables as modeled in model 1c were similar for first generation Mexican American, 2<sup>nd</sup> generation Mexican American, African American, and European American families. A simplified version of model 1c, showing only paths of interest and parameter estimates, is presented in Figure 6. See Table 6 for the parameter estimates for all paths estimated in model 1c.

As predicted, net of the influence of controls, having a higher income-to-needs ratio was associated with less family conflict ( $\beta [se] = -.23 [.05]$ ,  $p = .000$ ; see Table 6) and less maternal reports of depression ( $\beta [se] = -.15 [.04]$ ,  $p = .001$ ). Family conflict, in turn, was associated with more aggression ( $\beta [se] = .17 [.02]$ ,  $p = .000$ ) and less warmth ( $\beta [se] = -.05 [.02]$ ,  $p = .026$ ) toward the child. While maternal depression was associated with aggressive parenting ( $\beta [se] = .09 [.04]$ ,  $p = .034$ ), its association with parental warmth was not significant ( $\beta [se] = -.02 [.06]$ ,  $p = .709$ ). As expected, aggressive parenting was associated with both child internalizing ( $\beta [se] = .21 [.03]$ ,  $p = .000$ ) and externalizing behaviors ( $\beta [se] = .28 [.03]$ ,  $p = .000$ ). Warmth, however, was not significantly associated with internalizing behaviors, but was associated with externalizing behaviors ( $\beta [se] = -.05 [.02]$ ,  $p = .012$ ). Notably, in addition to having an indirect influence on child outcomes (via parenting), family conflict was also directly associated with both internalizing ( $\beta [se] = .12 [.02]$ ,  $p = .000$ ) and externalizing ( $\beta [se] = .15 [.02]$ ,  $p = .000$ ) behaviors.

Next, four social stressors (lack of family support, lack of friend support, fear for safety, and perceived discrimination) were added to model 1c to test whether they helped explain the association between income-to-needs ratio and family conflict (model 2a; see Figure 3). As shown in Table 5, the CFI (.906) and RMSEA (.044, CI = .037 - .050) for model 2a indicated adequate model fit. The AIC for model 2a, however, was much higher in comparison to the AIC for model 1c (1346 vs. 617, respectively). Guidelines for comparing competing, non-nested models give preference to the model with lowest AIC, which tends to be the model with less parameters (Kline, 2005). Thus, it cannot be said with confidence that model 2a better explains the data than model 1c. That aside, constraining the paths of interest across groups results in a non-significant  $\Delta\chi^2$  ( $\Delta\chi^2 = 33.77$ ,  $df = 24$ ,  $p = .088$ ), suggesting that constraining the model does not result in significantly worse model fit. To the extent that this model adequately represents the data, this non-significant test indicates that the paths from income-to-needs ratio to family conflict (via social stressors) function similarly across Mexican American, African American, and European American households. Parameter estimates of interest for model 2b are presented in Figure 7. See Table 7 for all parameters estimated for model 2b.

Addition of the four social stressors did help explain the association between income-to-needs ratio and family conflict, but only to a modest extent, as the parameter estimate for the link between income-to-needs ratio and family conflict remained relatively unchanged from model 1c ( $\beta [se] = -.23 [.05]$ ,  $p = .000$ ) to model 2b ( $\beta [se] = -.20 [.04]$ ,  $p = .000$ ). As expected, higher income-to-needs ratio was associated with significantly more support from family ( $\beta [se] = -.11 [.03]$ ,  $p = .000$ ; see Figure 7) and friends ( $\beta [se] = .12 [.02]$ ,  $p = .000$ ). Mothers with higher income-to-needs ratio were also significantly less likely to fear for their safety ( $\beta [se] = -.29[.06]$ ,



$p=.000$ ). Interestingly, income-to-needs ratio was positively associated with perceived discrimination ( $\beta [se] = .20 [.06]$ ,  $p=.000$ ).

While lack of friend support was not significantly associated with greater family conflict, lack of family support ( $\beta [se] = .34 [.05]$ ,  $p = .000$ ), fear for safety ( $\beta [se] = .09 [.02]$ ,  $p=.000$ ), and perceived discrimination ( $\beta [se] = .09 [.02]$ ,  $p=.000$ ) were all significantly associated with greater family conflict. These associations functioned similarly regardless of mother's ethnicity. The associations between family conflict, parenting, and child outcomes in model 2b remained the same as in model 1c.

Finally, to test whether neighborhood context helped explain the associations between income-to-needs ratio and mental health stressors, a model with direct associations between income-to-needs ratio and stressors (model 3a) was compared to a model with added measures of neighborhood concentrated poverty, immigrant concentration, and residential stability (model 3b; see Figure 4). As shown in Table 5, model 3a did not fit the data well. While the CFI was adequate (CFI = .931) the values of the RMSEA (.052) and its confidence interval (.038 - .065) did not suggest that the model estimated the data well. Addition of the three neighborhood measures (model 3b), resulted in slight improvement in model fit (CFI = .946) and a large decrease in AIC in comparison to model 3a (-2092 vs. 2928, respectively). However, the RMSEA (.048) and its confidence interval (.037 - .059) did not suggest adequate model fit. When parameters were fixed to be equal across groups (model 3c) CFI decreased (CFI = .900). A significant Satorra-Bentler scaled chi-square test ( $\Delta\chi^2 = 128.58$ ,  $df = 67$ ,  $p = .000$ ) indicated that constraining the paths to be equal across groups resulted in a significantly worse model, suggesting group differences in the association between income-to-needs ratio, neighborhood

characteristics, and mental health stressors. Because none of these models provided an adequate fit to the data, their parameter estimates were not interpreted.

### **Discussion**

This study builds on the existing research of the processes through which low income influences maternal mental stress, family conflict, parenting, and child well-being in several important ways. First, it is the only study to date—to my knowledge—to test the family process model with a diverse sample of European American, African American, and Mexican American families simultaneously. Second, it is the first study to test the family process model with first and second generation Mexican American families. Third, it considers the influence of social stressors and neighborhood context, in addition to income, on maternal mental health. The results indicate support for a family process model which posits that one way through which low-income influences child internalizing and externalizing behaviors is through its impact on family conflict and parenting behaviors.

Although the literature reviewed suggested that the first generation Mexican American families might differ from second generation families, the family process model fit the 1<sup>st</sup> and 2<sup>nd</sup> generation Mexican American families similarly. This is surprising given all of the theorized reasons for which the 1<sup>st</sup> and 2<sup>nd</sup> generation families should have differed. Examination of the sample characteristics (see table 2) however, indicates that while the income-to-needs ratio of the 1<sup>st</sup> generation families was significantly lower than the income-to-needs ratio of the 2<sup>nd</sup> generation, levels of self-reported depression, perceived discrimination, fear, lack of support, warmth, aggression, and child outcomes did not significantly differ between the two Mexican American groups. Perhaps the presence of a concentrated Mexican American population in Chicago tempered the development of differences between first and second generation

households (if, in fact, the families in this study lived in such enclaves). Future studies of Mexican American families living in areas without a significant Mexican American population would inform this line of research.

The family process model fit adequately across the European American, African American, and Mexican American families. As expected, a lower income-to-needs ratio was associated with more family conflict and more reports of maternal depression. Family conflict and maternal depression were both associated with aggression towards the child, which was, in turn, associated with child internalizing and externalizing behaviors. Interestingly, maternal warmth was not associated with internalizing behaviors, and was only modestly (negatively) associated with externalizing behaviors. Because maternal aggression (vs. maternal warmth) had greater association with youth internalizing and externalizing behaviors, interventions may be more effective if they focus on aggressive parenting. Other studies have found similar non-significant associations between warmth and internalizing symptoms when testing the family process model (e.g. Gonzales et al., 2011; Mistry et al., 2002). It may be that warmth matters more for promoting positive behaviors, rather than for protecting against behavior problems. Mistry et al. (2002) for example, found a significantly positive association between warmth and positive child social behavior (as indicated by autonomy, compliance, and social competence) and a non-significant association between warmth and problematic child social behavior (as indicated by externalizing problems, hyperactivity and disciplinary actions). Alternatively, it may be that the HOME measure of warmth is more predictive of positive child behaviors, rather than of behavioral problems, as Mistry et al. (2002) also used the HOME to assess warmth. The only other studies (from Table 1) to use observer ratings of warmth were Congers' (1993, 1993, 2002), however, his construct of parenting combined indicators of warmth with indicators of

hostility and discipline. Thus it may be that Conger's measure of nurturant/involved parenting was significantly associated with both positive adjustment and adjustment problems because, in addition to warmth, low hostility was also included as an indicator of nurturant/involved parenting.

Contrary to the expectation that family conflict would be directly associated with child outcomes among the Mexican American families *only*, family conflict was associated both directly and indirectly (via maternal aggression) with child outcomes – across *all* ethnic groups. This finding is consistent with the only other study to have tested for a direct association of family conflict on child outcomes with an ethnically diverse sample (Parke et al., 1994). While the direct path from family conflict to child outcomes did not reach significance for the European American sample in Parke's study, it was in the expected direction. It could be that we found a significant path because we had a larger sample, and possibly, more power to detect a significant association. Alternatively, the direct path from family conflict to child outcomes may have been significant for all groups in this study because, unlike Parke et al. (1994), our measure of family conflict was not specific to marital problems, but rather assessed conflict among *all* family members. Our finding that family conflict is significantly directly associated with child outcomes is consistent with other research suggesting that children exposed to family conflict exhibit negative reactions that are independent of parenting (Cummings & Davies, 1994; David, Steele, Forehand & Armistead, 1996; Dumka et al., 1997). These findings suggest that a low income-to-needs ratio is detrimental to child well-being not only because of its association with poorer parenting, but also because of its impact on family conflict.

The addition of maternal social stressors (lack of family support, lack of friend support, fear, and discrimination) helped explain a small piece of the association between income-to-

needs ratio and family conflict. As expected, mothers with lower income-to-needs ratios reported—in addition to depression—more fear for their safety, a greater lack of family support, and a greater lack of support from their friends in comparison to mothers with higher incomes. In turn, fear and lack of family support were significantly associated with family conflict. These patterns were consistent for *all* mothers in this sample, regardless of ethnicity or generation status. Interestingly, income-to-needs ratio was *positively* associated with discrimination. This finding is consistent with a growing body of literature documenting a positive association between income/education and discrimination among minorities (Cook et al., 2009; Cortes, Rogler, Malgady, 1994; Perez et al., 2008). Because more than four-fifths of our sample is of color, the positive association between income and discrimination is not surprising here. Notably, the association between income-to-needs ratio and family conflict did not change substantially upon inclusion of the social stressors, indicating the robustness of the association between income-to-needs ratio and family conflict. This suggests that interventions that reduce family conflict *and* bolster parenting may be more successful than programs that focus on parenting alone in mitigating the impact of poverty on child internalizing and externalizing behaviors.

Several limitations of this study, however, should be considered when interpreting the findings. First, this data is cross-sectional, impeding our ability to make any causal statements about the associations in the family process model. Relatedly, the use of path models does not provide confirmation of causal relations, nor does adequate model fit implicate that the model in question is “true.” At best, model fit is a way to determine whether the pattern of associations in the proposed model is an adequate representation of the data. Our findings suggest that low income is associated with maternal depression and family conflict, but it may also be that

maternal depression and family conflict lead to low income.<sup>6</sup> Studies with longitudinal data, which control for parent mental health and child behaviors at multiple time points, would greatly inform this issue. In addition, with the exception of warmth, all the data in this study is based on maternal report. Thus, we do not know the extent to which shared method variance influenced the significance of the associations we tested. Studies with multiple informants (teachers, fathers, and children) are needed to replicate these findings. On a similar note, as these data were extant, only the data collected could be utilized, thus constraining our ability to examine theoretically relevant constructs such as family cohesion and economic pressure and material hardship (Gershoff, Aber, Raver, & Lennon, 2006). It is possible that model fit could have been improved (particularly the model  $\chi^2$ ) with the addition of relevant constructs. Another limitation is that because of inadequate model fit, we were not able to test whether neighborhood characteristics influenced maternal mental stress. A lack of overlap in the neighborhoods in which residents of different ethnicities and SES lived prohibited us from doing so. Studies wanting to examine the influence of neighborhood characteristics on African American, European American, and Mexican American maternal well-being will need to ensure that an adequate number of mothers of each ethnicity are present in each neighborhood. Further, this study was limited in only looking at 1<sup>st</sup> and 2<sup>nd</sup> generation families of Mexican American descent. Although there were some U.S. born Mexican American mothers in the PHDCN, their limited sample size precluded us from being able to examine 3<sup>rd</sup> generation Mexican American families in this study. Finally, because our data is not nationally representative, its generalizability is limited. Despite these limitations, however, the consistency of the present findings with previous studies of the family

---

<sup>6</sup> Studies with community samples provide little support for the hypothesis that depressive symptoms lead to economic circumstances (Conger et al., 1993; Warr, Jackson, & Banks, 1988).

process model suggests that income and poverty operate through family processes similarly across groups.<sup>7</sup> Policies focusing on income and family processes might therefore be hypothesized to operate similarly across groups. Moreover, policies and programs aiming to lower family conflict and reduce maternal aggression may be expected to have an impact on both internalizing and externalizing behaviors, as these behaviors were impacted similarly by family conflict and aggressive parenting.

---

<sup>7</sup> Of course, questions regarding what form of intervention should be designed to best target these processes and/or whether interventions should be adapted to be relevant to their target audience deserve and require further research.

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Barrera et al., 2002</b>	Cross-sectional	300 7 <sup>th</sup> & 8 <sup>th</sup> graders	11-15 yrs M=12.9	Objective economic status= 1. Per capita income 2. Loss of work or wages (parent report)	Parent depressive symptoms:.. parent self-report (CES-D)	NONE	<b>Parental support</b> = 1.acceptance (CRPBI) 2.involvement 3.monitoring (Parent report)	<b>Int symptoms</b> = 1. depression (CDI) 2. anxiety (RCMAS) (child report)	NONE	Per-capita-income →perceived econPres →mom's depress symptoms →moms supportive parenting →INTERNAL SYMP only
Pathways from family economic conditions to adolescents' distress: Supportive parenting, stressors outside the family, and deviant peers.	LISREL  Tests int & ext outcomes in one model	<b>AfAm, EuroAm, MexAm</b>  176 intact families; 124 single mom families		Perceived economic hardship= 1.cant make ends meet 2. material needs 3. economic adjustments 4. financial strain (parent report)				<b>Ext symptoms</b> = 1. Youth self report scale (YSR)		-no significant gender differences  -may be significant differences between 1- and 2-parent families:  supportive parenting →Ext symptoms (for 2-parent families only)
<i>Journal of Community Psychology</i>				Association with deviant peers (child report)						
				Stress events outside the family= 1.peer relations 2. school stressors 3. neighborhood stressors (child report)						

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American; Int= Internalizing; Ext= Externalizing



Table 1.  
*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

[illegible]

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/controls	Parent mental health	Family conflict/dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Conger, Conger, Elder, Lorenz, Simons, &amp; Whitbeck, 1993</b>  Family economic stress and adjustment of early adolescent girls.  <i>Dev Psychology</i>	Cross-sectional	N=220 7 <sup>th</sup> grade girls Midwest rural	12-14 yrs (M=12.5)	Same as Conger et al., 1992 (above)	Same as Conger et al., 1992 (above)	Same as Conger et al., 1992 (above)	Same as Conger et al., 1992 (above)	Adolescent <b>positive adjustment</b> = same as Conger et al., 1992 (above)	YES	Econ Hardship→ EconPress; EconPress→ PC depressed mood; marital conflict→ parenting→ both adjust problems & positive adjustment
	LISREL (model tested in 2 parts)	Intact families w/sibling within 4 yrs of age of 7 <sup>th</sup> grader						<b>Adjustment problems</b> <b>1. Ext</b> antisocial/hostile (child report) 2. externalizing (sibling report) 3. emotional distress (depression/hostility ; SCL-90R, child report)	tested marital conflict→ positive adj (DE was not signif)  unclear whether tested marital conflict→ adjustment probs	(more strongly associated with adjustment problems than with positive adjustment)
	2 home visits (within 2 weeks)  1. 4 family members complete questions  2. videotaped interaction; observer rating  Separate tests for positive outcomes and negative outcomes	<b>EuroAm</b>						<b>Adjustment problems</b> <b>2. Int</b> Depression, anxiety, somatization subscales of SCL90R		Pos parenting neg assoc with neg outcomes

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Conger, Ge, Elder, Lorenz, Simons, &amp; Whitbeck, 1994</b>	Longitudinal (3yrs)	378 families, <b>EuroAm</b> rural Iowa	M=12.6 year 1	Same as Conger et al., 1992 (above) – (Yr 1)	Same as Conger et al., 1992 (above) assessed (Year 1)	Marital conflict 1. Observer rating (hostile, antisocial, negative, rejection, coercive) 2. Mother report 3. Father report (Year 1)	<b>Parental Hostility</b> = 1. Parent Report 2. Adolescent Report 3. Observer report (Year 2)	<b>Int &amp; ext symptoms</b>  (Year 3)	Unclear	EconPress→ PC depressed mood→ AND parent/adol financial conflict  PC depressed mood→marital conflict→ parent/adol financial conflict AND Parent hostility  Parent hostility→adol EXT symp AND adol INT symptoms  parent/adol financial conflict not sign assoc with ado int/ext
Economic stress, coercive family process, and developmental problems in adolescents <i>Child Dev</i>	2 home visits (within 2 wks) each year  1. 4 family members complete questions  2. videotaped interaction; observer rating	Iowa Youth and Families Project				Parent-adolescent financial conflict = 1. Mother report 2. Father report 3. Adolescent Report (Year 2)				

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Conger et al., 2002</b>	Cross-sectional	N=422 families with 2 caregivers (39% were both bio parents; 67% who were not romantic partners were PCs' parent, aunt or uncle)	10-11 yrs old (M=10.5 yrs)	Per-capita-income  Negative financial events  Economic pressure= 1. unmet material needs 2. cant make ends meet 3. financial cutbacks	PC depression 1. depress mood 2. Anhedonic depress (Clark & Watson, 1987)	Caregiver relationship warmth & hostility = 1. caregiver rating 2. observer rating	<b>Nurturant-involved parenting</b> =  1. PC's <b>control/management strategies</b> (PC, child & observer ratings)  <b>2.low hostility</b> (child & observer rating)  <b>3. warmth</b> (child & observer)	<b>Positive adjustment</b> = 1.school behavior 2.persistence 3.positive affect  <b>Ext &amp; int</b> symptoms (DISC-IV; PC and child reports)	Yes; as test of alternative model.  Found 'paradox' signif paths.  signif pos assoc between PC conflict & pos outcomes; neg assoc betwn conflict & extern.  Posited spurious due to multicollin & "over-fitting"	3 separate models to predict 3 separate DVs  EconHardship→ EconPress→Conflict→ Low nurturant-involved parenting→child outcome.  *PC depress→ conflict significant ONLY IF romantic partners  * no diff by child gender
Economic pressure in African American families: A replication and extension of the family stress model	Family and Community Health Study (FACHS) – Iowa & Georgia									
Dev Psychology	Interview & videotaped interaction	<b>AfAm</b>								
	SEM (FIML & AMOS )									

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

Source	Design	Sample	Child age	Income/controls	Parent mental health	Family conflict/dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Dennis et al., 2003</b>	Multiple regression	N=56 1 <sup>st</sup> gen immigrant moms from	4-13 years (M=8.8 yr)	Income-to-needs ratio	Depression (Beck Depression Inventory - BDI)	NONE	NONE	<b>CBCL intern/ext</b>	NONE	Econ press → mat depress → int and ext probs FOR BOYS
Economic Pressure, Maternal Depression, and Child Adjustment in Latino Families: An Exploratory Study	Cross-sectional	<b>Mex, Central &amp; South Am</b>		Economic pressure = 7 items	Perceived emotional support= 13 items, amount of emotional support from pple outside immediate family			Mom report		*Income not assoc to econ press (maybe b/c low power or variability)  direct effect of emotional support on depression  Emotional support moderated assoc between maternal depression & child intern probs (BUT not extern probs)  **lower support increases risk for depress independent of econ press

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Dumka et al., 1997</b> Risk, Conflict, Mothers' Parenting, and Children's Adjustment in Low-Income, Mexican Immigrant, and Mexican American Families  <i>Journal of Marriage and Family</i>	SEM  Cross-sectional	121 <b>Mex &amp; MexAm</b> families;	4 <sup>th</sup> graders	Family multiple risk = 20 items (ethnicity, poverty mobility, edu)  Mothers' acculturation (ARMSA)  Gender  All Mom report	NONE	Family conflict= Count of parent-parent conflict; p-c conflict; p-relative conflict  kid & mom report	<b>Supportive parenting</b> = CRPBI acceptance subscale  <b>Inconsistent discipline</b> (CRPBI)  kid & mom report	Mom's report via CBCL ( <b>conduct disorder &amp; depress</b> )  kid report via Child hostility scale & CDI ( <b>conduct disorder &amp; depression</b> )  kid & mom report	YES  (DE found for child report; but not mom's report)	Tested separate models for kid & mom report  <b>Kid report:</b> mom's supportive parenting partially mediate famconflict→ depress  <b>Mom report:</b> -inconsist discp fully mediate risk→ depress & part mediate risk → conduct dis  **higher acculturation assoc w/ lower inconsist discipline & lower child depression

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.

*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

Source	Design	Sample	Child age	Income/controls	Parent mental health	Family conflict/dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Ge et al., 1994</b> Parents' stressful life events and adolescent depressed mood  <i>Journal of Health and Social Behavior</i>	SEM cross-sectional sobel	451 <b>EuroAm</b> , rural families  Iowa Youth & Families Project	7 <sup>th</sup> grade – T1	Parent age Per-capita-income Parent educ	Parent depressive symptoms = SCL90R Same as Conger et al., 1992 (above)  Stressful life events (35 items) 1. mom report 2. dad report	NONE	Mom and dad <b>Hostile</b> <b>Harsh disciplin</b> <b>Inconsistent disc.</b>  Self, spouse, observer & child report  Same as Conger et al., 1992 (above)	<b>Depressive symptoms=</b> Same as Conger et al., 1992 (above)  Kid report Parent report Observer report	NONE	Tested 4 combin to account gender: Mom/daughter Mom/son Dad/daughter Dad/son  -when diff reporters are used (take out parent report & just use adol self-report), effects of parental stress on adol depressed mood are only indirect & mediated by parent MH & parenting indirect via parenting

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Gonzales, Coxe, Roosa, White, Knight, Zeiders, &amp; Saenz 2011</b>  Economic hardship, neighborhood context, and parenting: Prospective effects on Mexican-American adolescent's mental health  <i>American Journal of Community Psychology</i>	Longitud  T1=5 <sup>th</sup> grade T2=7 <sup>th</sup> grade  Mplus, FIML	750 <b>Mexican American</b> families from southwest; range of SES	T1: M=10.4 yrs	Annual family income  Perceived econ hardship= 1.inability to make ends meet 2. not enough money for necessities 3. financial strain  Birth country  Neighborhood disadvantage (% below pov; % single parent homes; % less than high school ed; % of families on assistance)  Perceived neighborhood danger (3 item scale) Neighborhood familism: 1.support & closeness 2.obligation 3. family as referent *control for T1 int.ext	NONE	NONE	<b>Warmth &amp; Harshness</b> (parent report; Child's report of parenting behavior inventory – CRPBI)	<b>Int / Ext</b> (DISC, both parent & child report; reports combined such that given symptom was present if reported by either respondent)	NONE	<b>Mom report:</b> Econ hardship→ less warmth AND more Harsh parenting  warmth AND Harsh parenting→Ext symptoms  Harsh parenting marginally related to INT symp  Warmth not assoc INT symp  <b>Dad report:</b> Econ hardship→ less warmth BUT warmth not sign assoc with INT OR EXT  Harsh parenting→Ext symptoms

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American



Table 1.

*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Loukas et al., 2008</b> Mothering and peer associations mediate cumulative risk effects for Latino youth.  <i>Journal of Marriage and Family</i>	SEM - Mplus	N=449	W1: M=11.9	Cumulative risk= 1. Financial strain	See cumulative risk	NONE	<b>Positive Parenting=</b> <b>-monitoring</b> (child report)	<b>W2 CBCL intern / external</b>	NONE	Positive mothering mediated assoc between cumulative risk & W2 assoc w/ deviant peers
	Longitud (W1 & W2)	N=464 <b>latinos</b> (48% mex; 28% PR, 11.6% Dominican)  84.5% single-parent families  'Welfare, children and families: A three city study'	W2: M=13.3	2. Neighborhood problems 3. Mom psychological distress (Brief Symptom Inventory-BSI)			<b>-trust/communic</b> (child report) <b>-school involve</b> (child report) <b>-positive mothering</b> (mom report)  Mom & child reports	Mom report		-deviant peer assoc mediated relation between mothering and intern / exter probs  **no direct assoc between W1 risk & W2 int/ext  **no direct assoc between mothering & W2 int/ext (but rather indirect via deviant peer)

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>McLoyd et al., 1994</b> Unemployment and work interruption among African American single mothers: Effects on parenting and adolescent socioemotional findings  <i>Child Dev</i>	Cross-sectional  Recursive path analysis	N=241 single <b>African American</b> mothers	7 <sup>th</sup> - 8 <sup>th</sup> grade	Past work interrupt Current employmt Financial strain	maternal depressive symptomology (self report, CES-D)  negative perception of maternal role  availability of instrumental support	NONE	<b>maternal punishment</b> =5 items	<b>Adol percept neg relat w/ mom</b>  Adol perception of family's economic hardship  <b>Cognitive distress</b>  <b>Depressive symptom</b> <b>Anxiety</b> <b>Self-esteem</b>  (child report)	NONE	Current unemployment (BUT NOT financial strain) → maternal depressive symptoms;  Maternal depress→negative percept of mothering role → punishment →adol depressive symptoms  Maternal depress→Punishment non significant

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/controls	Parent mental health	Family conflict/dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Mistry, et al. 2002</b> Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample  <i>Child Development</i>	SEM w/AMOS  Cross-sectional  Separate models for pos outcomes & problem behaviors	N = 419  58% <b>AfAm</b> 28% <b>Hispan</b> 13% <b>Non-Hisp white</b> ;  'New Hope Study,' Milwaukee	5-12 yrs (M=8.26)	Annual Income Percvd economic pressure Percvd material hardship (parent report)  New Hope participant  gender(m/f) AfAm(y/n) Hisp (y/n)	Financial worry (5 items)  Efficacy (Hope scale, Snyder 96)  Depress (CES-D)	NONE	<b>Warmth</b> (HOME, r=.64)  <b>Discipline</b> (4 items)   Mom report & Interviewer obs.	<b>Social competence</b> 1.competence & sensitivity 2. compliance/self-control  3.autonomy  <b>Conduct problems</b> = 1. ext probs 2. hyperact 3. freq of disciplinary action  Teacher report	NONE	Family process = mediator of economic hardship on children's social adjustment  -pathways operate similarly for boys & girls and for AfAm & Hisp families  **To test if child gender or ethnicity moderated the relations, multi-group relations were conducted (ran 6 models & tested for measurement invariance)

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/controls	Parent mental health	Family conflict/dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>Parke et al., 2004</b> Economic Stress, Parenting, and Child Adjustment in Mexican American and European American Families  <i>Child Development</i>	SEM  Cross-sectional	N=278 111 <b>EuroAm</b> 167 <b>MexAm</b> (17% first gen)  'Riverside Economic Stress Project'	5 <sup>th</sup> graders (M=11.4yrs)	Econ hardship: -Per capita income -unstable work -income loss  Econ pressure: -ability make ends meet -material hardship  Accult (ARMSA)	Depress (BDI)	Marital probs Marital instability  Mom & Dad report	<b>Hostile/rejectng</b>  <b>Passive/inconsitent</b>  Mom report Dad report Child report	<b>child adjustment problems</b> = Combined CBCL internalizing & externalizing  Mom report Dad report	YES; Sign for MexAm but not EuroAMs	For all: Econ hardship→ EconPress→ depress symptoms  Depress symptoms→ → maritalprobs → hostile parenting  For Latinos: Maritalprobs→ child adjustment For EuroAm: Paternal hostile parenting→ child adjustment  **Maternal accult assoc with higher maritalprob & lower hostile parenting

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

*Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued*

*Note.* DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 1.  
Overview of Previous U.S. Studies Testing the Family Process Model, by Ethnic Group, continued

Source	Design	Sample	Child age	Income/ controls	Parent mental health	Family conflict/ dynamics	Parenting	Child outcome	DE test FC→DV	Finding
<b>White et al., 2009</b> Cultural and Contextual Influences on Parenting in Mexican American Families. <i>Journal of Marriage &amp; Family</i>	SEM w/ MPLUS	N=570 <b>MexAm</b> 2-parent fams	5 <sup>th</sup> graders	Sense of NeighDanger -its safe in neigh -neigh is safe for kids to play in daytime -safe for kids to play outside your home	Parent psych distress (CES-D)	NONE	<b>Acceptance</b> (7 items from CRPBI)	NONE	NONE	EconStress→ depress symptoms → parenting
	Cross-sectional	Kids: 1 <sup>st</sup> gen 33% 2 <sup>nd</sup> gen 43% 3 <sup>rd</sup> gen 10% 4 <sup>th</sup> + gen 15%		Econ hardship: -inability to make ends meet -not enough money for necessities -financial strain  EnglishCompetencyPress (5 items) proxy for accult stress			<b>Consistent discipline</b> (7 items from CRPBI)			NeighStress→ DAD (not mom)depress symptoms → parenting  **effects of acculturative stress inconsistent

Note. DE= Direct effect; FC=family conflict; DV= dependent variable; PC = Primary Caregiver; Int = Internalizing; Ext=Externalizing; AfAm= African American; EuroAm= European American; MexAm= Mexican American

Table 2.

*PHDCN Sample Characteristics (Cohorts 6, 9, 12, & 15): Whole Sample and by Subgroup*

	Whole Sample ( <i>N</i> =2025)	Generation 1 ( <i>N</i> =216)	Generation 2 ( <i>N</i> =571)	African American ( <i>N</i> =881)	European American ( <i>N</i> =357)
	%	%	%	%	%
Family Structure <sup>aa</sup>					
Two biological parent household	48.4	79.2	69.5	20.3	65.3
Mother's education <sup>aa</sup>					
Less than high school	25.4	73.4	62.0	1.4	2.5
Some high school	20.5	15.1	17.0	25.2	16.9
High school graduate only	11.8	6.5	7.8	13.4	17.2
Some more than high school	33.7	3.0	10.7	52.8	38.6
BA or more	8.6	2.0	2.4	7.3	24.8
Child Gender					
Male	49.2	53.2	47.3	48.7	51.0
Female	50.8	46.8	52.7	51.3	49.0
Maternal self-reported depression <sup>aa</sup>	11.1	7.4	8.1	13.2	13.0
	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Child age <sup>a, d</sup>	10.2 (3.4)	10.8 (3.1)	9.8 (3.3)	10.3 (3.4)	10.1 (3.4)
Income-to-needs ratio <sup>a, b, c, e, f</sup>	1.6 (1.3)	0.8 (0.6)	1.3 (0.9)	1.5 (1.3)	2.7 (1.3)
Maternal social stressors					
Perceived discrimination <sup>b, d, f</sup>	1.5 (1.2)	1.2 (1.1)	1.3 (1.2)	1.7 (1.2)	1.3 (1.1)
Fear for safety <sup>b, c, d, e, f</sup>	1.7 (1.2)	2.1 (1.1)	1.9 (1.2)	1.6 (1.2)	1.2 (1.1)
Lack of support from family <sup>b, c, d, e</sup>	6.3 (1.9)	5.9 (1.9)	5.9 (1.6)	6.6 (2.0)	6.4 (2.1)
Lack of support from friends <sup>b, c, d, e, f</sup>	9.3 (2.9)	10.7 (3.5)	10.2 (3.2)	8.9 (2.5)	8.0 (2.3)
Family conflict <sup>b, c, d, e</sup>	1.2 (1.4)	0.7 (1.1)	0.9 (1.2)	1.4 (1.5)	1.2 (1.5)
Warmth <sup>c, e, f</sup>	5.7 (1.7)	5.4 (1.7)	5.6 (1.7)	5.6 (1.7)	6.1 (1.4)
Parent to child aggression <sup>b, c, d, e</sup>	6.8 (6.3)	5.9 (5.9)	5.6 (5.6)	7.5 (6.4)	7.5 (7.2)
W2 Externalizing CBCL raw score <sup>b, d, f</sup>	8.0 (6.7)	6.2 (6.0)	6.8 (6.5)	9.6 (6.9)	7.6 (6.4)
W2 Internalizing CBCL raw score <sup>c, e</sup>	9.0 (7.8)	10.3 (7.2)	9.8 (7.9)	8.6 (8.0)	7.7 (7.2)

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods. All measures are from wave 1, except for CBCL scores which are from wave 2 (w2). Generation 1 = both mother and child were born in Mexico. Generation 2= mother is Mexican born, child is U.S. born.

<sup>aa</sup> Denotes statistically significant difference between groups.

<sup>a</sup> Denotes statistically significant difference between Generation 1 and Generation 2 at the .05 level.

<sup>b</sup> Denotes statistically significant difference between Generation 1 and African American at the .05 level.

<sup>c</sup> Denotes statistically significant difference between Generation 1 and European American at the .05 level.

<sup>d</sup> Denotes statistically significant difference between Generation 2 and African American at the .05 level.

<sup>e</sup> Denotes statistically significant difference between Generation 2 and European American at the .05 level.

<sup>f</sup> Denotes statistically significant difference between African American and European American at the .05 level.

Table 3.

*Measurement of Independent Variables and Range, Mean, and Standard Deviation for the PHDCN Data (whole sample)*

Item Content		Min-Max	M	SD
Perceived discrimination <sup>a,f</sup>	3 items ( $\alpha = .71$ )	0.00-3.00	1.47	1.16
Disliked because of ethnicity/race?				
Treated unfairly because of race?				
Seen friend treated badly because of race?				
Fear for safety <sup>b</sup>	3 items ( $\alpha = .73$ )	0.00-3.00	1.67	1.19
Afraid child may be hurt by violence in neighborhood?				
Afraid child may be hurt by violence in front of house?				
Afraid child may be hurt by violence at school?				
Lack of support from family <sup>c</sup>	5 items ( $\alpha = .79$ )	4.00-15.00	6.28	1.92
Know family will always be there for me				
Family tells me they think I'm valuable				
Know my family will always stand by me				
Family has confidence in me				
Family helps me find solutions to my problems				
Lack of support from friends <sup>c</sup>	6 items ( $\alpha = .76$ )	3.00-18.00	9.32	2.94
With friends able to completely relax				
Share same approach to life as friends				
Know friends enjoy doing things with me				
Have $\geq 1$ friend could tell anything to				
Friends would take time to talk about problems				
I feel very close to some of my friends				
FES conflict <sup>b</sup>	5 items ( $\alpha = .70$ )	0.00-5.00	1.18	1.40
Members fight a lot				
Members get so angry they throw things				
Members often criticize each other				
Members sometimes hit each other				
Members often try to out-do each other				

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods.

<sup>a</sup> Originally, 3 point response option (1 = *never*, 2 = *sometimes*, 3 = *often*)

<sup>b</sup> Originally, 2 point response option (0 = *no*; 1 = *yes*)

<sup>c</sup> Originally, 3 point response option (1 = *very true*, 2 = *somewhat true*, 3 = *not true*)

<sup>d</sup> 7 point response option (0 = *never*, 1 = *once ever*, 2 = *twice ever*, 3 = 3-5 times, 4 = 6- 10 times, 5 = 11-20 times, and 6 = more than 20 times)

<sup>e</sup> Recoded, into dichotomous variable such that "*not true*"=1 ("*very true*" and "*somewhat true*"=0)

<sup>f</sup> Recoded, into dichotomous variable such that "*sometimes*" and "*often*" =1 ("*never*" =0)



Table 3.

*Measurement of Independent Variables and Range, Mean, and Standard Deviation for the PHDCN Data (whole sample), continued*

Item Content		Min-Max	M	SD
Warmth <sup>b</sup>	7 items ( $\alpha = .74$ )	0-7.00	5.65	1.66
Mom voice positive speaking of/to child?				
Mom answers child 's questions verbally?				
Mom responds positively RA praise of child?				
Mom uses child endearment/diminutive>=twice?				
Mom praises child behavior/qualities twice?				
Mom caresses/kisses/cuddles child once?				
Mom helps child demonstrate achievement?				
Maternal aggression <sup>d</sup>	7 items ( $\alpha = .70$ )	0-39.00	6.80	6.33
# of times mom sulk/refuse talk if problem				
# of times mom swear at child if problem				
# of times mom stomp out if problem				
# of times mom act spitefully if problem				
# of times mom threaten to hit child if problem				
# of times mom throw something if problem				
# of times mom cried				

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods.

<sup>a</sup> Originally, 3 point response option (1 = *never*, 2 = *sometimes*, 3 = *often*)

<sup>b</sup> Originally, 2 point response option (0 = *no*; 1= *yes*)

<sup>c</sup> Originally, 3 point response option (1= *very true*, 2= *somewhat true*, 3= *not true*)

<sup>d</sup> 7 point response option (0 = *never*, 1 = *once ever*, 2 = *twice ever*, 3 = 3-5 times, 4 = 6-10 times, 5 = 11-20 times, and 6 = more than 20 times)

<sup>e</sup> Recoded, into dichotomous variable such that "*not true*"=1 ("very true" and "*somewhat true*" =0)

<sup>f</sup> Recoded, into dichotomous variable such that "*sometimes*" and "*often*" =1 ("*never*" =0)

Table 4.  
Correlations Among Path Model Variables of the PHDCN (n=2025)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Income	1.00													
2. Mom depress	-.05	1.00												
3. Lack fam supp	-.06*	.13***	1.00											
4. Lack frnd supp	-.22***	-.00	.17***	1.00										
5. Fear	-.20***	.09***	.08**	.17***	1.00									
6. Discrim	.10***	.08***	.08***	-.02	.06**	1.00								
7. Conflict	-.15***	.15***	.29***	.01	.16***	.15***	1.00							
8. Warmth	.23***	.02	-.07**	-.06*	-.01	.08***	-.08**	1.00						
9. Aggression	-.03	.14***	.16***	-.01	.12***	.18***	.38***	-.09***	1.00					
10. W2 intern	-.13***	.14***	.09***	.08**	.20***	.12***	.25***	-.09**	.26***	1.00				
11. W2 extern	-.11***	.13***	.18***	.03	.14***	.15***	.35***	-.12***	.35***	.61***	1.00			
12. Neigh pov	-.43***	.02	.06**	.10***	.17***	-.05*	.11***	-.10***	.06*	.07**	.11***	1.00		
13. Neigh imm	-.20***	-.01	-.07**	.21***	.17***	-.16***	-.09***	-.01	-.09***	.04	-.15***	.12***	1.00	
14. Neigh res	.22***	-.01	-.01	-.13***	-.11***	.09***	-.01	.04	-.02	-.08**	.02	-.45***	-.41***	1.00

Note. PHDCN= Project on Human Development in Chicago Neighborhoods. Income= income-to-needs ratio; Mom depress= maternal self-reported depression; Lack fam supp= lack of family support; Lack frnd supp= lack of friend support; fear= fear for safety; Discrim = perceived discrimination; Conflict= family conflict; W2 intern= W2 CBCL internalizing raw score; W2 extern = W2 CBCL externalizing raw score; Neigh pov= concentrated poverty, neighborhood level; Neigh imm= immigrant concentration, neighborhood level; Neigh res= residential stability, neighborhood level

<sup>+</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .001$ . \*\*\*  $p < .0001$ .

Table 5.

*Fit Indices and  $\chi^2$  Change of All Competing Path Models Constructed Using PHDCN Data*

	$\chi^2$	df	$\chi^2/\text{df}$	RMSEA		SRMR	AIC	TLI	CFI	$\Delta\chi^2$	$\Delta df$	prob
				$\varepsilon$	CI							
Model 1												
1a. Indirect effects model	200.22	64	3.13	.065	(.055 - .075)	.041	723	.740	.908			
1b. Direct effects model	108.62	56	1.94	.043	(.031 - .055)	.025	643	.885	.964	80.38	8	.000
1c. Model 1b, plus paths fixed across groups	136.07	89	1.53	.032	(.021 - .043)	.033	617	.935	.968	32.02	33	.516
Model 2												
2a. Model 1c, plus four social stress variables	394.84	201	1.96	.044	(.037 - .050)	.045	1346	.823	.906			
2b. Model 2a, plus paths fixed across groups	423.88	225	1.88	.042	(.036 - .048)	.048	1332	.838	.904	33.77	24	.088
Model 3												
3a. Income -> stressors	94.45	40	2.36	.052	(.038 - .065)	.034	2928	.806	.931			
3b. Model 3a, plus 3 neighborhood variables	138.61	64	2.17	.048	(.037 - .059)	.033	-2092	.813	.946			
3c. Model 3b, plus paths fixed across groups	267.68	131	2.04	.045	(.038 - .053)	.051	-2072	.833	.900	128.58	67	.000

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods. All chi-square values were statistically significant at  $p < .05$ , except as noted. RMSEA= root mean square error of approximation;  $\varepsilon$  = the RMSEA value; CI= confidence interval for the RMSEA value; SRMR= standardized root mean square residual; TLI= Tucker-Lewis index; CFI= comparative fit index;  $\Delta\chi^2$ = change in the Satorra-Bentler scaled chi-square;  $\Delta df$ = change in degrees of freedom from the immediately preceding model; prob=probability associated with the  $\Delta\chi^2$  value.

Table 6.

*Unstandardized Parameter Estimates for all Paths in the Family Process Model Constructed With PHDCN Data With Direct Paths From Family Conflict to Child Outcomes and with Paths of Interest Constrained to be Equal Across Groups (Model 1c).*

Predictor	Dependent Variable	Parameter Estimate	SE	p
Income-to-needs ratio	Maternal depression	-.15	.04	.001
	Family conflict	-.23	.05	.000
Maternal depression	Family conflict	.09	.03	.000
	Warmth	-.02	.06	.709
	Maternal aggression	.09	.04	.034
	W2 internalizing CBCL	.01	.05	.922
	W2 externalizing CBCL	-.02	.04	.630
Family conflict	Warmth	-.05	.02	.026
	Maternal aggression	.17	.02	.000
	W2 internalizing CBCL	.12	.02	.000
	W2 externalizing CBCL	.15	.02	.000
Warmth	W2 internalizing CBCL	-.02	.02	.293
	W2 externalizing CBCL	-.05	.02	.012
Maternal aggression	W2 internalizing CBCL	.21	.03	.000
	W2 externalizing CBCL	.28	.03	.000
Family structure	Family conflict	-.07	.05	.154
	Warmth	.07	.05	.180
	Maternal aggression	-.02	.03	.450
	W2 internalizing CBCL	-.02	.03	.552
	W2 externalizing CBCL	.03	.03	.215
Child age at wave 1	W2 internalizing CBCL	.02	.04	.613
	W2 externalizing CBCL	-.07	.05	.158
Maternal education	Family conflict	-.03	.05	.523
	Warmth	.19	.08	.014
	Maternal aggression	.08	.05	.124
Male	W2 internalizing CBCL	-.03	.03	.215
	W2 externalizing CBCL	.01	.02	.663

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods. Fit indices of Model 1c are: CFI=.968, TLI=.935, SRMR= .033, RMSEA =.032 CI (.021-.043); SE= standard error; W2= Wave 2; CBCL = child behavior checklist

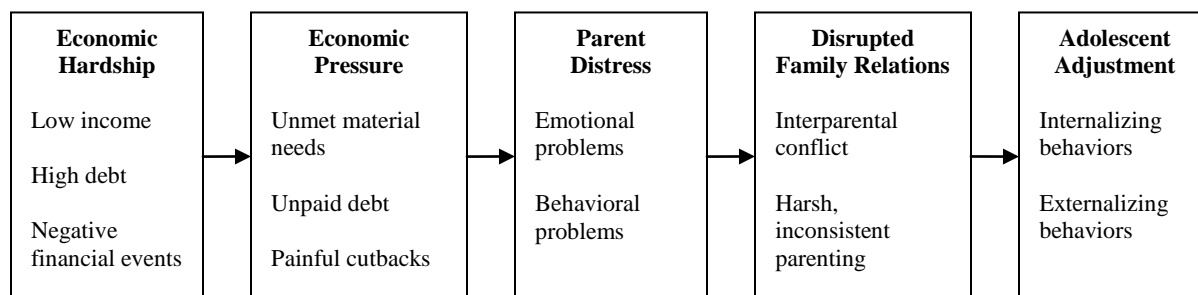
Table 7.

*Unstandardized Parameter Estimates for All Paths in the Family Process Model Constructed with PHDCN Data with Direct Paths From Family Conflict to Child Outcomes, with Inclusion of Social Stressors to Help Explain the Association Between Income-to-Needs Ratio and Family Conflict (Model 2a)*

Predictor	Dependent Variable	Parameter Estimate	SE	p
Income-to-needs ratio	Maternal depression	-.15	.04	.000
	Lack family support	-.11	.03	.000
	Lack friend support	-.11	.03	.000
	Fear	-.29	.06	.000
	Discrimination	.20	.06	.000
	Family conflict	-.20	.04	.000
Maternal depression	Family conflict	.06	.03	.030
	Warmth	-.02	.06	.704
	Maternal aggression	.09	.04	.035
	W2 internalizing CBCL	.01	.05	.919
	W2 externalizing CBCL	-.02	.04	.626
Lack family support	Family conflict	.34	.05	.000
Lack friend support	Family conflict	-.06	.04	.143
Fear	Family conflict	.09	.02	.000
Perceived discrimination	Family conflict	.09	.02	.000
Family conflict	Warmth	-.05	.02	.026
	Maternal aggression	.17	.02	.000
	W2 internalizing CBCL	.12	.02	.000
	W2 externalizing CBCL	.15	.02	.000
Warmth	W2 internalizing CBCL	-.02	.02	.293
	W2 externalizing CBCL	-.05	.02	.012
Maternal aggression	W2 internalizing CBCL	.21	.03	.000
	W2 externalizing CBCL	.28	.03	.000
Family structure	Family conflict	-.04	.05	.348
	Warmth	.07	.05	.187
	Maternal aggression	-.02	.03	.443
	W2 internalizing CBCL	-.02	.03	.553
	W2 externalizing CBCL	.03	.03	.215
Child age at wave 1	W2 internalizing CBCL	.02	.04	.615
	W2 externalizing CBCL	-.07	.05	.157
Maternal education	Family conflict	-.10	.06	.073
	Warmth	.20	.08	.011
	Maternal aggression	.08	.05	.105
Male	W2 internalizing CBCL	-.03	.03	.215
	W2 externalizing CBCL	-.07	.05	.157

*Note.* PHDCN= Project on Human Development in Chicago Neighborhoods. Paths of interest constrained to be equal across groups. Fit indices of model 2a are: CFI=.904, TLI=.838, RMSEA =.042 CI (.036-.048); SE= standard error; W2= Wave 2; CBCL = child behavior checklist

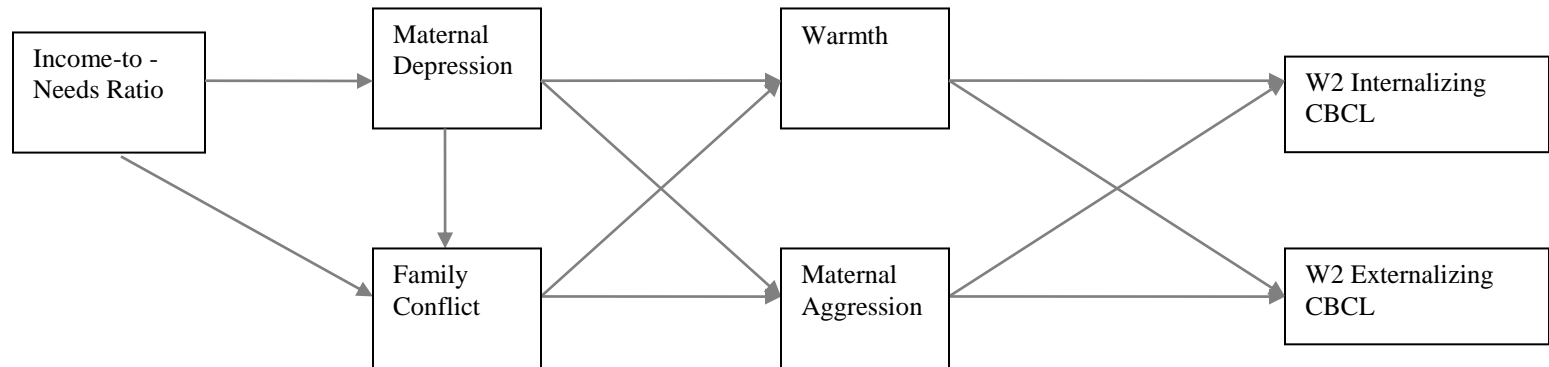
Figure 1. The family stress model of economic hardship



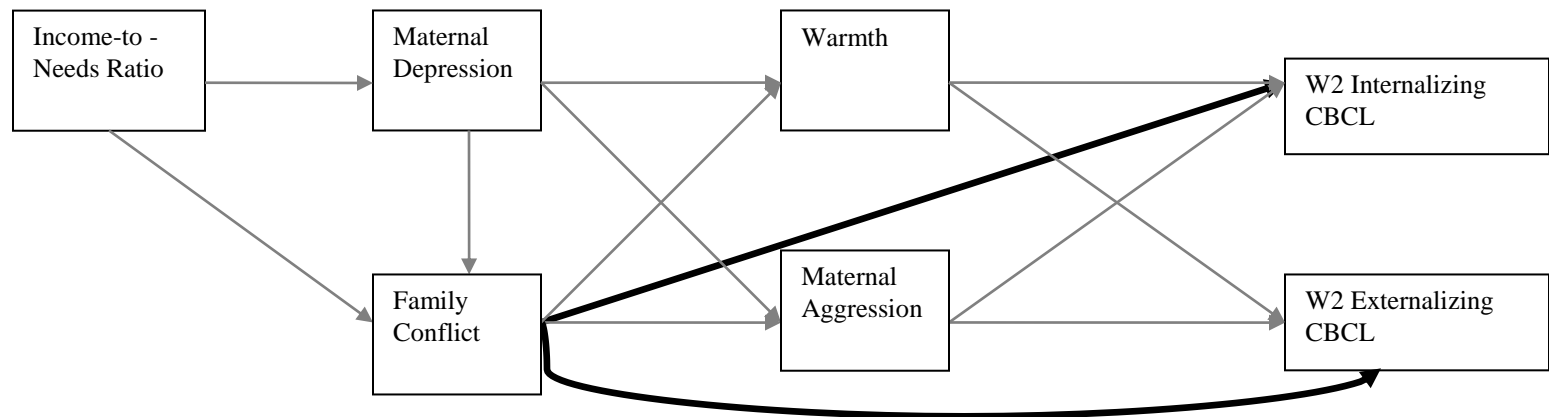
(Adapted from Conger & Conger, 2007)

Figure 2. Competing Models for Research Question 1

**Model 1a**



**Model 1b**



*Figure 2.* Model 1a is compared to Model 1b, where Model 1b has additional direct paths from family conflict to child outcomes. Theoretical models depicting the roles of income-to-needs ratio, maternal depression, family conflict, and parenting (all measured at wave 1) in predicting wave 2 adolescent internalizing and externalizing behaviors. Though not shown, all models also control for: the influence of maternal depression on child outcomes; the influence of family structure on maternal depression, on family conflict, on parenting, and on child outcomes; the influence of child age and gender on child outcomes; and the influence of maternal education on parenting. The covariance of the residual error of warmth and parent-to-child aggression is accounted for, as is the covariance of the residual error of W2 internalizing and W2 externalizing behaviors.

Figure 3: Inclusion of Social Stressors to Help Explain the Association Between Income-to-Needs Ratio and Family Conflict

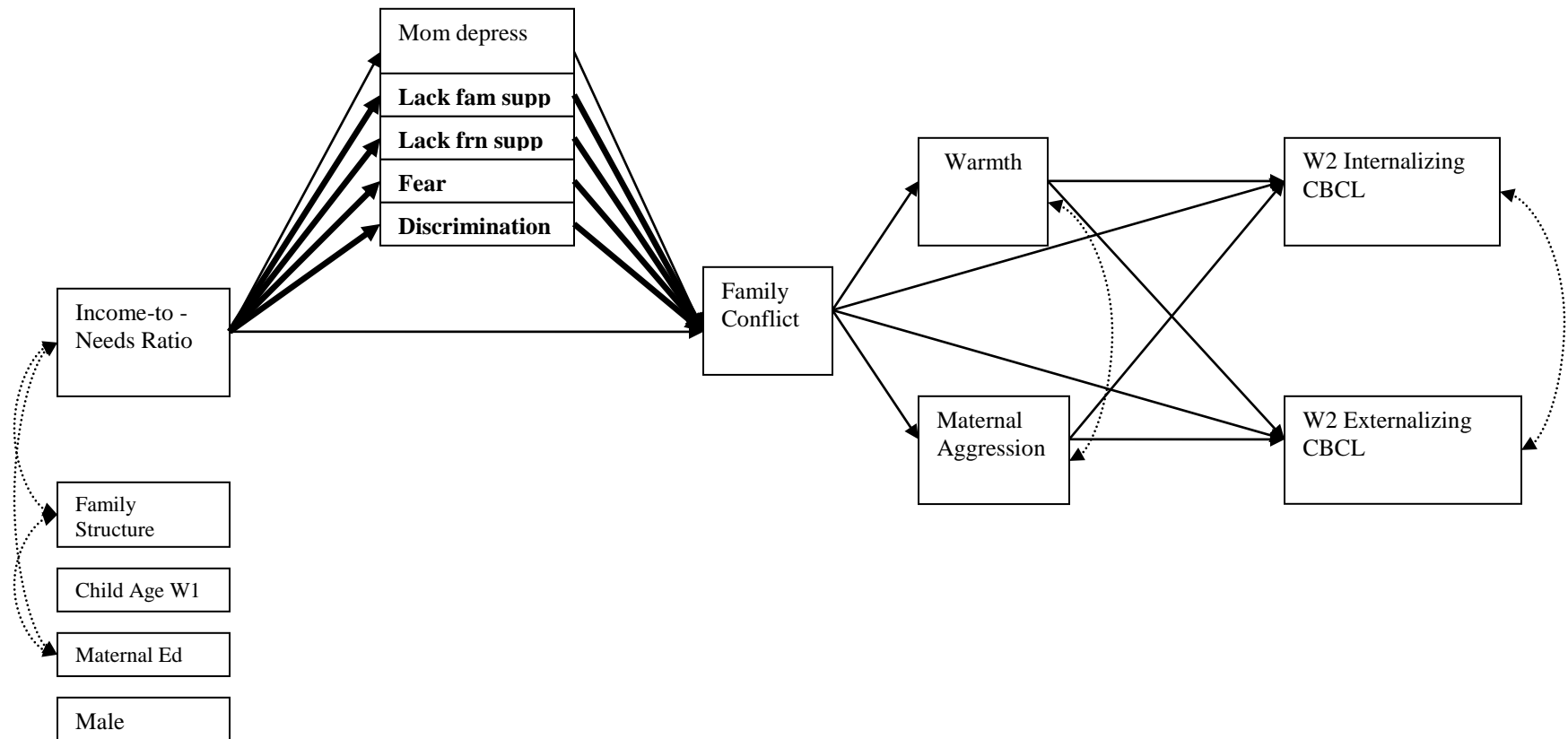


Figure 3. Theoretical model 2a depicting the roles of income-to-needs ratio, maternal depression, social stressors, family conflict, and parenting (all measured at wave 1) in predicting wave 2 adolescent internalizing and externalizing behaviors. Social stressors are in bold type. Though not illustrated, all analyses control for the influence of: gender, child age, and family structure on internalizing behaviors and externalizing behaviors; maternal education and family structure on warmth and on maternal aggression; maternal education and family structure on family conflict; maternal depression on warmth, maternal aggression, internalizing behaviors and externalizing behaviors. Dotted double headed arrow lines represent the covariance between the residual error terms. The covariance between the residual error terms of the social stressors with each other, and with maternal education and family structure were also estimated. CBCL=child behavior checklist (maternal report); Mom depress = self-reported maternal depression; Lack Fam supp= Lack of support from family; Lack Frn supp= Lack of support from friends; W2 = wave 2.



Figure 4. Competing Models for Research Question 3

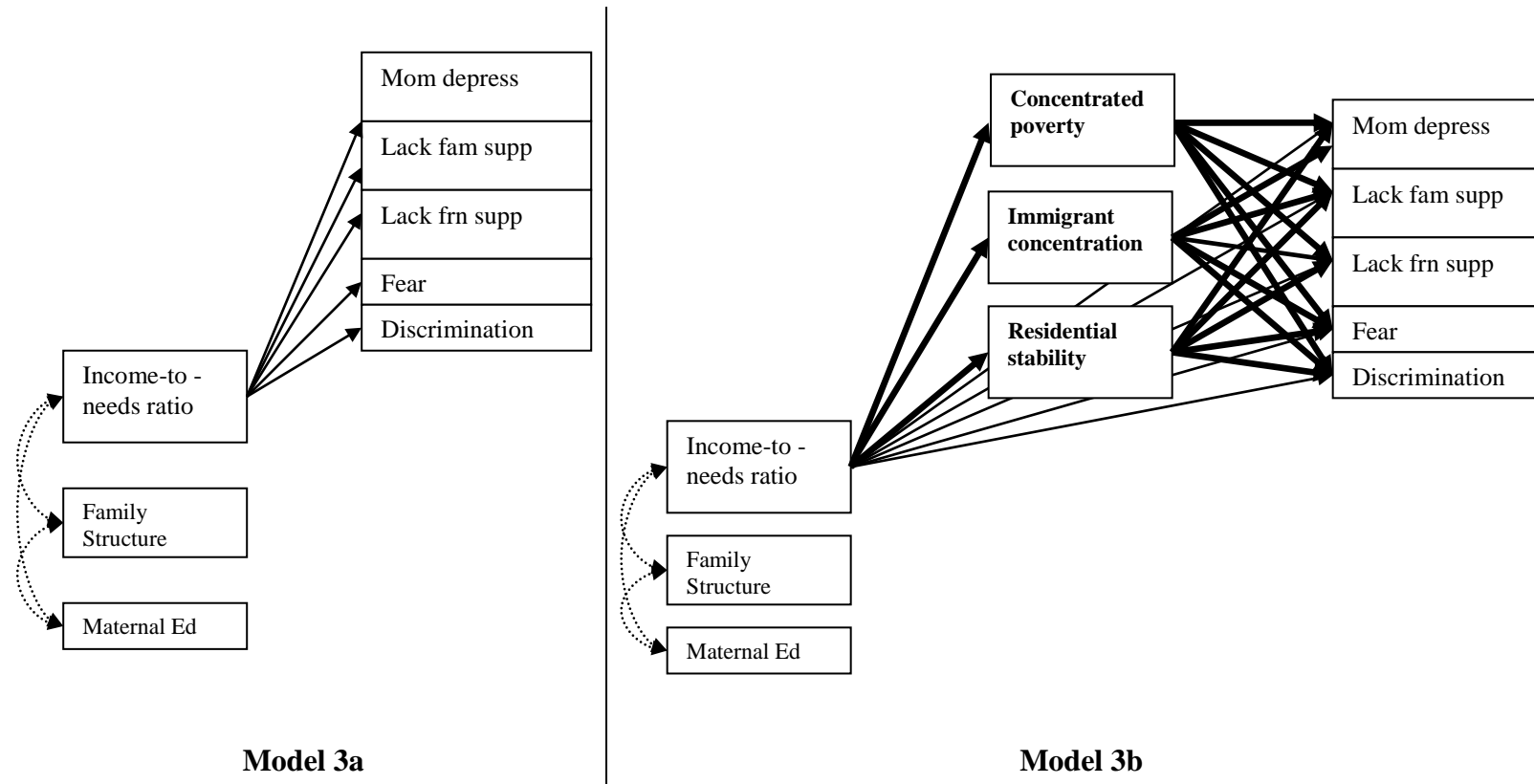


Figure 4. Model 3a is compared to Model 3b to see if inclusion of neighborhood characteristics (concentrated poverty, immigrant concentration, and residential stability) in Model B helps explain the association between income-to-needs ratio and stressors. Neighborhood characteristics are in bold type. Mom depress = self-reported depression; Lack fam supp= Lack of support from family; Lack frnd supp= Lack of support from friends; Dotted double headed arrow lines represent the covariance between the residual error terms. Though not illustrated, the covariance between the residual error terms of the social stressors with each other, and with maternal education and family structure were also estimated. CBCL=child behavior checklist (maternal report); W2 = wave 2.

Figure 5. Model '1b': Preferred Path Model for Research Question 1

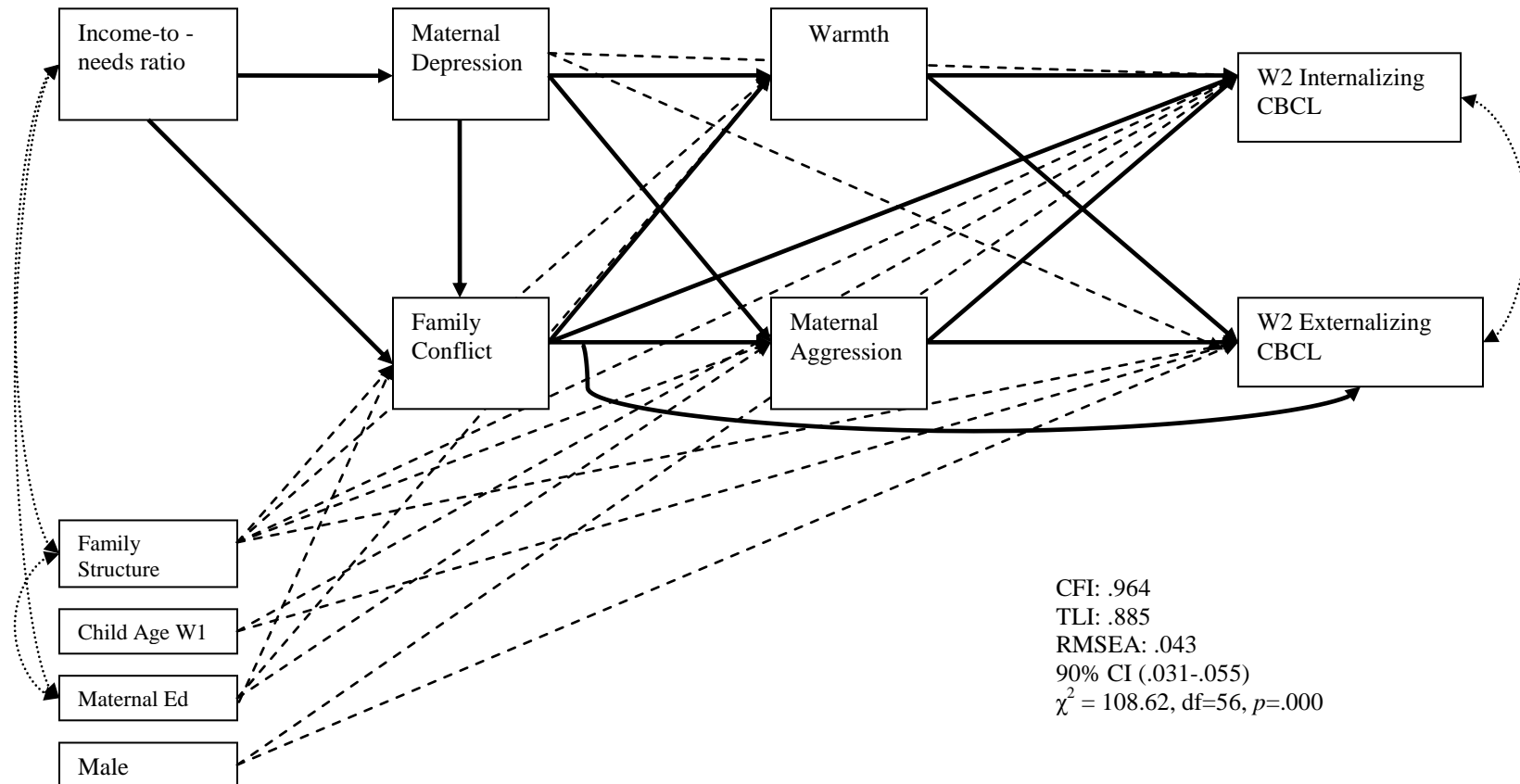


Figure 5. Path model depicting the roles of income-to-needs ratio, maternal mental health stress, family conflict, and parenting (all measured at wave 1) in predicting wave 2 adolescent internalizing and externalizing behaviors. Bold solid paths are paths of interest. Dashed lines represent the influence of control variables. Dotted double headed arrow lines represent the covariance between the residual error terms. CBCL=child behavior checklist (maternal report); W2 = wave 2.

Figure 6. Family Process Model with Direct Path from Family Conflict to Outcomes, Constrained Across Groups

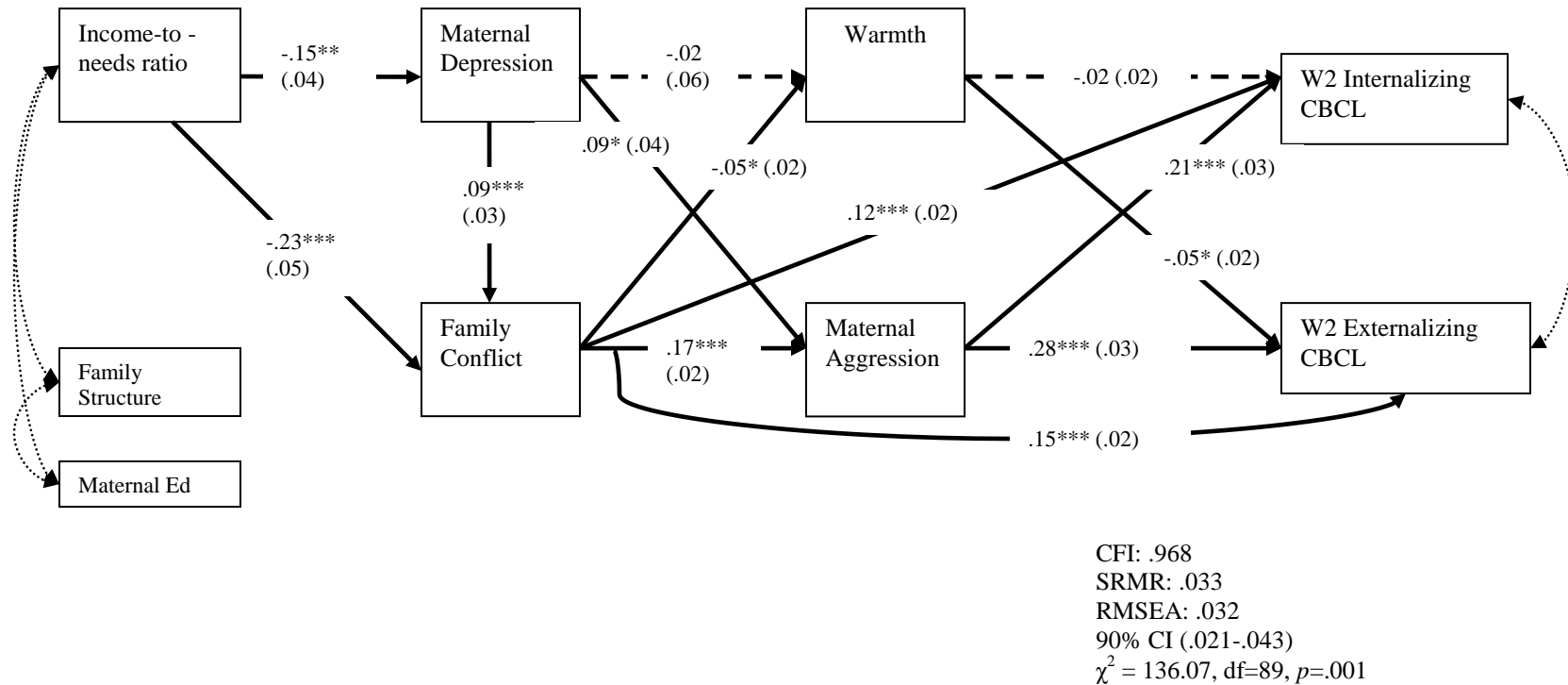


Figure 6. Unstandardized parameter estimates (with standard errors in parentheses) from model depicting the roles of income-to-needs ratio, maternal mental depression, family conflict, and parenting (all measured at wave 1) in predicting wave 2 adolescent internalizing and externalizing behaviors. Model constrained to be equal across subgroups. Dashed lines represent non-significant paths. Dotted double headed arrow lines represent the covariance between the residual error terms. Though not shown, model controls for the influence of family structure on family conflict, warmth, aggression, and on adolescent internalizing behaviors and externalizing behaviors; maternal education on family conflict, warmth, and aggression; maternal depression on adolescent internalizing and externalizing behaviors; gender on adolescent internalizing and externalizing behaviors; child's age at wave 1 on adolescent internalizing and externalizing behaviors. CBCL=child behavior checklist (maternal report); W2 = wave 2.  $*p<.05$ .  $**p<.01$ .  $***p<.001$ .

Figure 7: Inclusion of Social Stressors to Help Explain the Association Between Income-to-Needs Ratio and Family Conflict

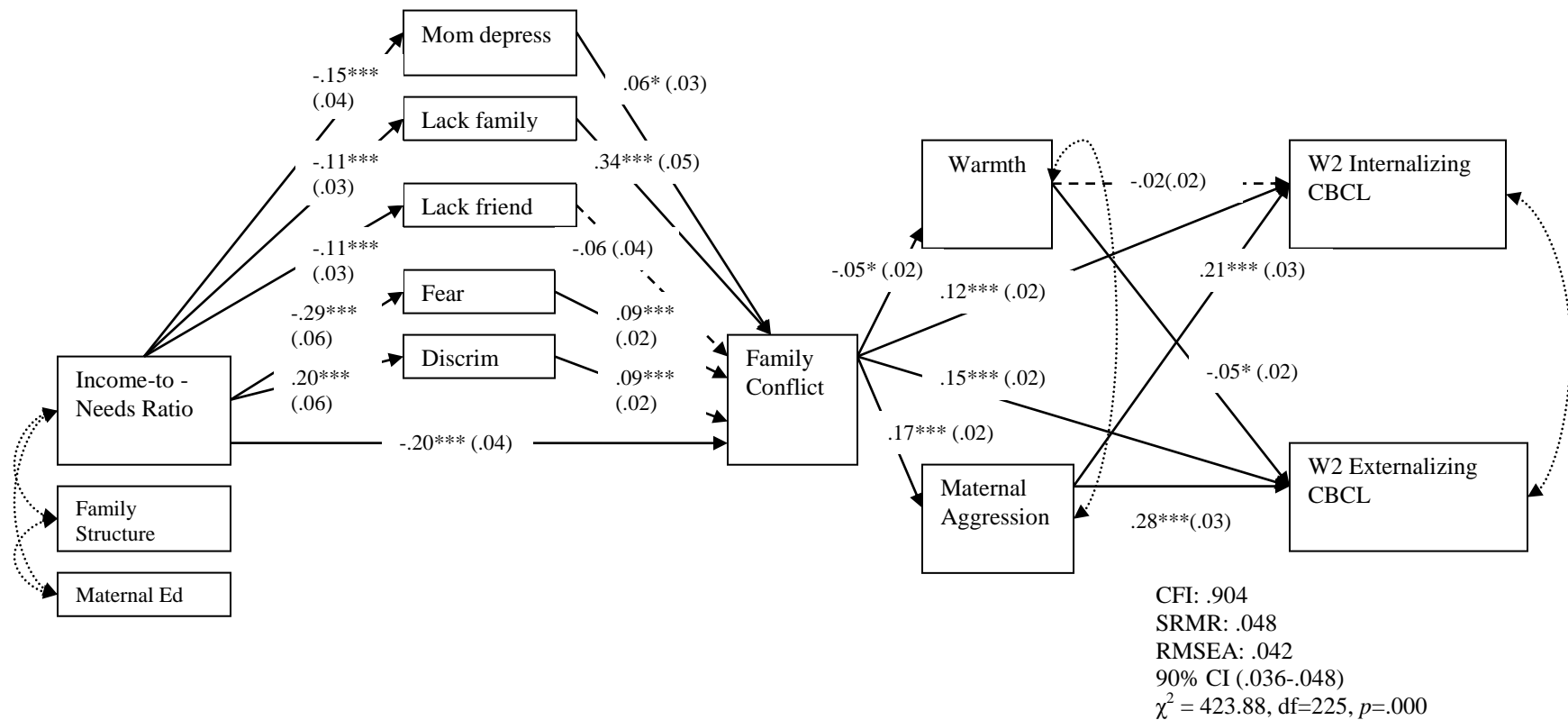


Figure 7. Unstandardized parameter estimates (with standard errors in parentheses) from model depicting the roles of income-to-needs ratio, maternal mental depression, social stressors, family conflict, and parenting (all measured at wave 1) in predicting wave 2 adolescent internalizing and externalizing behaviors. Model constrained to be equal across subgroups. Dashed lines represent non-significant paths. Dotted double headed arrow lines represent the covariance between the residual error terms. Though not shown, model controls for the influence of family structure on family conflict, warmth, aggression, and on adolescent internalizing behaviors and externalizing behaviors; maternal education on family conflict, warmth, and aggression; maternal depression on adolescent internalizing and externalizing behaviors; gender on adolescent internalizing and externalizing behaviors; child's age at wave 1 on adolescent internalizing and externalizing behaviors. The covariance between the residual error terms of the social stressors with each other, and with maternal education and family structure were also estimated. CBCL=child behavior checklist (maternal report); W2 = wave 2. Mom depress = self-reported maternal depression; Lack Family= Perceived lack of support from family; Lack friend= Perceived lack of support from friends; W2 = wave 2. \* $p<.05$ . \*\* $p<.01$ . \*\*\* $p<.001$ .

## References

- Abidin R.R., Jenkins, C.L., McGaughey, M.C. (1992). The relationship of early family variables to children's subsequent behavioral adjustment. *Journal of Clinical Child Psychology*, 21(1):60–69.
- Abraído-Lanza, A.F., Chao, M.T., & Flórez, K. (2005). Do healthy behaviors decline with greater acculturation?: Implications for the Latino mortality paradox. *Social Science & Medicine*, 61, 1243-1255.
- Abraido-Lanza, A. F., Dohrenwend, B. P., Ng-Mak, D. S., & Turner, J. B. (1999). The Latino mortality paradox: a test of the "salmon bias" and healthy migrant hypotheses. *American Journal of Public Health*, 89(10), 1543.
- Acevedo, M.C. (2000). The role of acculturation in explaining ethnic differences in the prenatal health-risk behaviors, mental health, and parenting beliefs of Mexican American and European American at-risk women, *Child Abuse & Neglect*, 24(1), 111–127.
- Acevedo-Garcia, D., Soobader, M. J., & Berkman, L. F. (2005). The Differential Effect of Foreign-Born Status on Low-Birthweight by Race/Ethnicity and Education. *Pediatrics*, 115, e20–e30.
- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4–18 and 1991 Profile* Department of Psychiatry, University of Vermont, Burlington, VT.
- Adler, N.E., Boyce, T., Chesney, M.A., Cohen, S., Folkman, S., Kahn, R.L., & Syme, S.L. (1994). Socioeconomic status and health: The challenge of the gradient. *American Psychologist*, 49(1), 15-24.
- Adler, N., Epel, E. Castellazzo, G., & Ickovics, J. (2000). Relationship of subjective and objective social status with psychological and physical health in healthy White women. *Health Psychology*, 19, 586–592.
- Alba, R., Denton, N.A., Hernandez, D.J., Disha, I., McKenzie, B., & Napierala, B. (2010). Nowhere near the same: The neighborhoods of Latino children. In N. Landale, S. McHale, & A. Booth (Eds.), *Growing up Hispanic: Health and development of children of immigrants* (pp. 3-48). Washington, DC: Urban Institute Press.
- Alegria, M., Canino, G., Shrout, P. E., Woo, M., Duan, N., Vila, D., ...Meng, X.L. (2008). Prevalence of mental illness in immigrant and non-immigrant US Latino groups. *American Journal of Psychiatry*.
- Alegria, M., Shrout, P. E., Woo, M., Guarnaccia, P., Sribney, W., Vila, ...Canino, G. (2007). Understanding differences in past-year psychiatric disorders for Latinos living in the US. *Social Science & Medicine*, 65(2), 214–230.
- Alegria, M., Takeuchi, D., Canino, G., Duan, N., Shrout, P., Meng, X. L., Vega, W., et al. (2004). Considering context, place and culture: the National Latino and Asian American Study. *International Journal of Methods in Psychiatric Research*, 13(4), 208–220.
- Allison, K. W. (1998). Stress and oppressed social category membership. In J. K. Swim & C. Stangor (Eds.), *Prejudice: The target's perspective* (pp. 145-170). San Diego, CA: Academic Press.
- Almeida J, Subramanian SV, Kawachi I, Molnar BE (2011). Is blood thicker than water? Social support, depression and the modifying role of ethnicity/nativity status. *Journal of Epidemiology and Community Health*, 65: 51-56.
- Aneshensel, C. S. (2009). Neighborhood as a Social Context of the Stress Process. *Advances in the Conceptualization of the Stress Process*, 35–52.

- Aneshensel, C. S., & Sucoff, C. A. (1996). The neighborhood context of adolescent mental health, *Journal of Health and Social Behavior*, 37, 293–310.
- Aunola, K., & Nurmi, J.E. (2005). The role of parenting styles in children's problem behavior. *Child Development*, 76, 1144–1159.
- Bacallao, M.L. & Smokowski, P.R. (2007). The costs of getting ahead: Mexican family systems after immigration. *Family Relations*, 56, 52–66.
- Baptiste, D.A. (1993). Immigrant families, adolescents, and acculturation: Insights for therapists. *Marriage and Family Review*, 19, 341–363.
- Barrera, M., Prelow, H. M., Dumka, L. E., Gonzales, N. A., Knight, G. P., Michaels, M. L., Roosa, M. W., et al. (2002). Pathways from family economic conditions to adolescents' distress: Supportive parenting, stressors outside the family, and deviant peers. *Journal of Community Psychology*, 30(2), 135–152.
- Bayer, J. K., Sanson, A. V., & Hemphill, S. A. Parent influences on early childhood internalizing difficulties. *Journal of Applied Developmental Psychology*, 27(6), 542–559.
- Behnke, A. O., MacDermid, S. M., Coltrane, S. L., Parke, R. D., Duffy, S., & Widaman, K. F. (2008). Family Cohesion in the Lives of Mexican American and European American Parents. *Journal of Marriage and Family*, 70(4), 1045–1059. doi:[10.1111/j.1741-3737.2008.00545.x](https://doi.org/10.1111/j.1741-3737.2008.00545.x)
- Beiser, M., Hou, F., Hyman, I., & Tousignant, M. (2002). Poverty, Family Process, and the Mental Health of Immigrant Children in Canada. *Am J Public Health*, 92(2), 220–227.
- Belle, D. (1990). Poverty and Women's Mental Health. *American Psychologist*, 45(3), 385–389.
- Belle, D. & Doucet, J. (2003). Poverty, inequality, and discrimination as sources of depression among US women. *Psychology of Women Quarterly*, 27(2), 101–113.
- Belle, D., Longfellow, C., & Makosky, V. P. (1982). Stress, depression and the mother-child relationship: A report of a field study. *International Journal of Sociology of the Family*, 12, 251–263.
- Bentler, P. M. (1990). Comparative Fit Indexes in Structural Models. *Psychological Bulletin*, 107:238–246.
- Berkel, C., Knight, G. P., Zeiders, K. H., Tein, J. Y., Roosa, M. W., Gonzales, N. A., & Saenz, D. (2010). Discrimination and Adjustment for Mexican American Adolescents: A Prospective Examination of the Benefits of Culturally Related Values. *Journal of Research on Adolescence*, 20, 4, 893–915.
- Bethel, J.W. & Schenker, M.B. (2005). Acculturation and smoking patterns among Hispanics: A review. *American Journal of Preventive Medicine*, 29(2), 143–148.
- Bingenheimer, J. B., Raudenbush, S. W., Leventhal, T., & Brooks-Gunn, J. (2005). Measurement equivalence and differential item functioning in family psychology. *Journal of Family Psychology*, 19, 441–455.
- Borrell, L.N. (2005). Racial identity among Hispanics: implications for health and well-being. *Am J Public Health*, 95: 379–381
- Brodsky, A. E. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. *Journal of Community Psychology*, 24, 4, 347–363.
- Brody, G. H., Stoneman, Z., Flor, D., McCrary, C., Hastings, L., & Conyers, O. (1994). Financial resources, parent psychological functioning, parent co-caregiving, and early adolescent competence in rural two-parent African-American families. *Child Development*, 65, 590–605.
- Brooks-Gunn, J., Duncan, G.J. & Maritato, N. (1997). Poor families, poor outcomes: The well-

- being of children and youth. In J. Brooks-Gunn, & G. Duncan (Eds.). *Consequences of growing up poor* (pp. 1-17). New York, NY: Russell Sage
- Brooks-Gunn, J., & Furstenberg, F. F., Jr. (1989). Adolescent sexual behavior. *American Psychologist*, 44(2), 249-257.
- Brown, G.W., Bhrolchain, M.N., & Harris, T. (1975). Social class and psychiatric disturbance among women in an urban population. *Sociology*, 9, 225-54.
- Brown, T. N., Williams, D. R., Jackson, J. S., Neighbors, H. W., Torres, M., Sellers, S. L., & Brown, K. T. (2000). "Being black and feeling blue": The mental health consequences of racial discrimination. *Race and Society*, 2(2), 117-131.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. Bollen and J. Long (Eds.) *Testing Structural Equation Models* (pp. 136-162). Newbury Park, CA: Sage.
- Browning, C. R. & Cagney, K.A. Moving beyond poverty: Neighborhood structure, social processes, and health. *Journal of Health and Social Behavior*, 44, 552-571.
- Brunton-Smith, I. & Sturgis, P. (2011). Do neighborhoods generate fear of crime? An empirical test using the British crime survey. *Criminology*, 49(2), 331-369.
- Buehler, C., & Gerard, J. M. (2002). Marital Conflict, Ineffective Parenting, and Children's and Adolescents' Maladjustment. *Journal of Marriage and Family*, 64(1), 78-92.  
doi:[10.1111/j.1741-3737.2002.00078.x](https://doi.org/10.1111/j.1741-3737.2002.00078.x)
- Buriel, R. & Cardoza, D. (1988). Sociocultural correlates of achievement among three generations of Mexican-American high school seniors. *American Educational Research Journal*, 25, 177-192.
- Buriel, R., Mercado, R., Rodriguez, J., & Chavez, J. M. (1991). Mexican-American disciplinary practices and attitudes toward child maltreatment: A comparison of foreign and native-born mothers. *Hispanic Journal of Behavioral Sciences*, 13, 78-94.
- Burnam, M. A., Hough, R. L., Karno, M., Escobar, J. I., & Telles, C. A. (1987). Acculturation and lifetime prevalence of psychiatric disorders among Mexican Americans in Los Angeles. *Journal of Health and Social Behavior*, 28, 89-102.
- Buriel, R. (1993). Childrearing Orientations in Mexican American Families: The Influence of Generation and Sociocultural Factors. *Journal of Marriage and Family*, 55(4), 987-1000.
- Buriel, R., Love, J., & De Ment, T. (2006). The Relation of Language Brokering to Depression and Parent-Child Bonding Among Latino Adolescents. *Acculturation and parent-child relationships: Measurement and development*, 249-270.
- Buriel, R., Mercado, R., Rodriguez, J., & Chavez, J. M. (1991). Mexican-American disciplinary practices and attitudes toward child maltreatment: A comparison of foreign- and native-born mothers. *Hispanic Journal of Behavioral Sciences*, 13(1), 78-94.
- Carlson, V. J., & Harwood, R. L. (2003). Attachment, culture, and the care giving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican mother-infant pairs. *Infant Mental Health Journal*, 24, 53-73.
- Ceballo, R., & McLoyd, V. C. (2002). Social support and parenting in poor, dangerous neighborhoods. *Child Development*, 73(4), 1310-1321.
- Chao, R. K. (2006). The prevalence and consequences of adolescents' language brokering for their immigrant parents. *Acculturation and parent-child relationships: Measurement and development*, 271-296.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, 65, 1111-

1119.

- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255.
- Chilman, C. S. (1993). Mexican and Spanish-origin American families. In H. P. McAdoo (Ed.), *Family ethnicity: Strength in diversity* (pp. 141-163). Thousand Oaks, CA: Sage Publications.
- Cho, Y., Frisbie, W.P., Hummer, R.A., & Rogers, R.G. (2004). Nativity, duration of residence, and the health of Hispanic adults in the United States. *International Migration Review* 38(1):184-211.
- Cohen, S., Janicki-Deverts, D., and Miller, G. (2007). Psychological Stress and Disease. *Journal of the American Medical Association*, 298, 1685–87.
- Collins, J.W. & Shay, D. (1994). Prevalence of low birth weight among Hispanic infants with United States-Born and foreign-born mothers: The effect of urban poverty.” *American Journal of Epidemiology*. 139:184-192.
- Conger, R. D., & Conger, K. J. (2007). Understanding the processes through which economic hardship influences families and children. In R. Crane and E. Marshall (Eds.), *Handbook of Families and Poverty: Interdisciplinary Perspectives*, 64-81. Thousand Oaks, CA: Sage Publications.
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development*, 63, 526-541.
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1993). Family economic stress and adjustment of early adolescent girls. *Developmental Psychology*, 29, 206-219.
- Conger, R. D., Ebert-Wallace, L., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*, 38, 179–193.
- Conger, R. D., & Elder, G. H. (1994). *Families in troubled times*. New York: DeGruyter.
- Conger, R. D., Elder, G. H., Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., Huck, S., et al. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family*, 52(3), 643–656.
- Conger, R. D., Ge, X., Elder, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family processes, and developmental problems of adolescents. *Child development*, 65, 541-561.
- Conger, R. D., Patterson, G. R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development*, 66, 80–97.
- Conger, K. J., Rueter, M. A., & Conger, R. D. (2000). The role of economic pressure in the lives of parents and their adolescents: The family stress model. In L. J. Crockett & R. J. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 201 – 223). Cambridge, England: Cambridge University Press.
- Cook, B., Alegria, M., Lin, J. Y., & Guo, J. (2009). Pathways and Correlates Connecting Exposure to the US and Latino Mental Health. *American Journal of Public Health*, 99, 2247–2254.
- Cortes, D.E., Rogler, L.H., & Malgady, R.G. (1994). Biculturalism among Puerto Rican adults in the United States. *American Journal of Community Psychology*, 22(5), 707-721.



- Cox, M. J., & Paley, B. (1997). Families as systems. *Annual Review of Psychology*, 48, 243–267.
- Cuellar, I., Arnold, B., & Maldonado, R. (1995). Acculturation rating scale for Mexican Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Sciences*, 17, 275–304.
- Cuéllar, I., Arnold, B., & Gonzalez, G. (1995). Cognitive referents of acculturation: Assessment of cultural constructs in Mexican Americans. *Journal of Community Psychology*, 23, 339–356.
- Cutrona, C.E., Russell, D.W., Brown, A.P., Clark, L.A., Hessling, R.M., & Gardner, K.A. (2005). Neighborhood context, personality, and stressful life events as predictors of depression among African American women. *Journal of Abnormal Psychology*, 114(1):3–15.
- David, C., Steele, R., Forehand, R., & Armistead, L. (1996). The role of family conflict and marital conflict in adolescent functioning. *Journal of Family Violence*, 11 (1), 81–91.
- de Anda, D. (1984). Bicultural socialization: Factors affecting the minority experience. *Social Work*, 29, 101–107
- De Leon, C. F., & Markides, K. S. (1988). Depressive symptoms among Mexican Americans: A three-generation study. *American journal of epidemiology*, 127(1), 150.
- Deater-Deckard K, Dodge KA, Bates JE, Pettit GS. (1996). Discipline among African American and European American mothers: Links to children's externalizing behaviors. *Developmental Psychology*. 32:1065–1072.
- Deater-Deckard, K., Dodge, K.A., Bates, J.E., & Pettit, G.S. (1998). Multiple risk factors in the development of externalizing behavior problems: Group and individual differences. *Developmental Psychopathology*, 10(3) 469–439.
- De Kemp, R. A., Scholte, R. H., Overbeek, G., & Engels, R. C. (2006). Early adolescent delinquency: The role of parents and best friends. *Criminal Justice and Behavior*, 33, 488–510.
- Delgado, M. (1980). Providing child care for Hispanic families. *Young Children*, 35, 26–32.
- Dennis, J. M., Parke, R. D., Coltrane, S., Blacher, J., & Borthwick-Duffy, S. A. (2003). Economic Pressure, Maternal Depression, and Child Adjustment in Latino Families: An Exploratory Study. *Journal of Family and Economic Issues*, 24(2), 183–202.  
doi:[10.1023/A:1023706424725](https://doi.org/10.1023/A:1023706424725)
- Dodge KA, Pettit GS, Bates JE. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*. 65:649–665
- Dorsey, S., Forehand, R., & Brody, G. (2007). Coparenting conflict and parenting behavior in economically disadvantaged single parent African American families: The role of maternal psychological functioning. *Journal of Family Violence*, 22, 621–630.
- Downey, G., & Coyne, J. (1990). Children of depressed parents: an integrative review. *Psychological bulletin*, 108(1), 50–76.
- Dumka, L. E., Roosa, M. W., & Jackson, K. M. (1997). Risk, Conflict, Mothers' Parenting, and Children's Adjustment in Low-Income, Mexican Immigrant, and Mexican American Families. *Journal of Marriage and Family*, 59(2), 309–323.
- Duncan, G., & Brooks-Gunn, J. (Eds.). (1997). *Consequences of growing up poor*. New York: Russell Sage Foundation.
- Duncan, G. J., Brooks-Gunn, J., & Klebanov, P. K. (1994). Economic deprivation and early childhood
- Elder, G. H., Jr. 1974. *Children of the Great Depression: Social change in life experience*.

- Chicago, IL: University of Chicago Press. (Reissued as 25th Anniversary Edition, Boulder, CO: Westview Press, 1999).
- Elder, G.H., Jr. (1999). Family Influences and Adolescents' Lives. In Frank F. Furstenberg, Jr., Thomas D. Cook, Jacquelynne Eccles, Glen H. Elder, Jr., and Arnold Sameroff (eds.), *Managing to Make It: Urban Families and Adolescent Success*, (Chapter 6, pp. 120-144). Chicago: University of Chicago Press.
- Elder Jr, G. H., Van Nguyen, T., & Caspi, A. (1985). Linking family hardship to children's lives. *Child Development*, 56(2), 361–375.
- Enders, C. K. (2001). The performance of the full information maximum likelihood estimator in multiple regression models with missing data. *Educational and Psychological Measurement*, 61, 713–740.
- Enders, C.K. & Bandalos, D.L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 8(3), 430-457.
- Escobar, G. (2006). *The optimistic immigrant*. Retrieved from Pew Research Center Publications website: <http://pewresearch.org/pubs/28/the-optimistic-immigrant>.
- Escovar, P. L., & Lazarus, P. J. (1982). Cross-cultural child-rearing practices: Implications for school psychologists. *School Psychology International*, 3, 143-148.
- Falicov, C.J. (1996). Mexican families. In McGoldrick, M., Giordano, J. & Pearce, J.K. (Eds.). *Ethnicity and family therapy* (2<sup>nd</sup> ed., pp. 169–182). Guilford Press, New York.
- Farley, T., Galves, A., Dickinson, L. M., & Perez, M. D. J. D. (2005). Stress, Coping, and Health: A Comparison of Mexican Immigrants, Mexican-Americans, and Non-Hispanic Whites. *Journal of Immigrant Health*, 7(3), 213-220. doi:[10.1007/s10903-005-3678-5](https://doi.org/10.1007/s10903-005-3678-5)
- Farmer, E. (1995). Extremity of externalizing behavior and young adult outcomes. *Journal of Child Psychology & Psychiatry*, 36, 617–632.
- Feldmeyer, B. (2009). Immigration and violence: The offsetting effects of immigrant concentration on Latino violence. *Social Science Research*, 38, 717-731.
- Feldmeyer, B. & Steffensmeier, D. (2009). "Immigration and Homicide: A Comparison Across Race/Ethnicity." *Homicide Studies* 13:211-226.
- Field, A. (2005). Comparing several means: ANOVA (GLM1). In A.Field (Ed.) *Discovering Statistics Using SPSS* (pp.309-362). Thousand Oaks, CA: Sage Publications.
- Finch, B.K., Kolody, B., and Vega, W.A. (2000). Perceived discrimination and depression among Mexican-Origin adults in California. *Journal of Health and Social Behavior* . 41(3): 295-313.
- Finch, A. J., Lipovsky, J. A., & Casat, C. D. (1989). Anxiety and depression in children and adolescents: Negative affectivity or separate constructs. In P. C. Kendall & D. Watson (Eds.), *Anxiety and depression: Distinctive and overlapping features* (pp. 171–202). San Diego, CA:Academic Press.
- Finch, B.K., & Vega, W.A. (2003). Acculturation stress, social support, and self-rated health among Latinos in California. *Journal of Immigrant Health*, 5(3), 109-117.
- Flores, E., Tschann, J.M., Dimas, J.M., Bachen, E.A., Pasch, L.A., & de Groat, C.L. (2008). Perceived discrimination, perceived stress, and mental and physical health among Mexican-origin adults. *Hispanic Journal of Behavioral Sciences*, 30 (4), 401-424.
- Flores, E., Tschann, J., Van Oss-Marin, B., and Pantoja, P. (2004). Marital conflict and acculturation among Mexican American husbands and wives. *Cultural Diversity and Ethnic Minority Psychology*, 10, 39-52.

- Fortuna, L. R., Perez, D. J., Canino, G., Sribney, W., & Alegria, M. (2007). Prevalence and Correlates of Lifetime Suicidal Ideation and Attempts among Latino Subgroups in the United States. *The Journal of clinical psychiatry*, 68(4), 572-581.
- Frank, R., Cerdá, M., & Rendón, M. (2007). Barrios and burbs: Residential context and health-risk behaviors among Angeleno adolescents. *Journal of Health and Social Behavior*, 48, 283-300.
- Franzini, L., Ribble, J. C., & Keddie, A. M. (2001). Understanding the Hispanic paradox. *Ethnicity and Disease*, 11(3), 496-518.
- Freeberg, A. L., & Stein, C. H. (1996). Felt obligation towards parents in Mexican-American and Anglo-American young adults. *Journal of Social and Personal Relationships*, 13, 457-471.
- Furstenberg, F. F., Belzer, A., Davis, C., Levine, J. A., Morrow, K., & Washington, M. (1993). How families manage risk and opportunity in dangerous neighborhoods. In W. J. Wilson (Ed.), *Sociology and the public agenda* (pp. 231-258). Newbury Park, CA: SAGE.
- Galea, S., Ahern J., Nandi, A., Tracy, M., Beard, J., & Vlahov, D. (2007). Urban neighborhood poverty and the incidence of depression in a population-based cohort study. *Annals of Epidemiology*, 17(3):171-179.
- García Coll, C., Lamberty, G., Jenkins, R., Pipes McAdoo, H. P., Crnic, K., Wasik, B. H., & Garcia, H. V. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, 67, 1891-1914.
- Garcia Coll, C. G., Meyer, E. C., & Brillion, L. (1995). Ethnic and minority parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (pp. 189-209). Mahwah, NJ: Erlbaum.
- Ge, X., Conger, R. D., Lorenz, F. O., Elder, G. H., Montague, R. B., & Simons, R. L. (1992). Linking family economic hardship to adolescent distress. *Journal of Research on Adolescence*, 2(4), 351-378.
- Ge, X., Conger, R. D., Lorenz, F. O., & Simons, R. L. (1994). Parents' stressful life events and adolescent depressed mood. *Journal of Health and Social Behavior*, 35(1), 28-44.
- Gee, G. C., Ryan, A., Laflamme, D. J., & Holt, J. (2006). Self-Reported Discrimination and Mental Health Status Among African Descendants, Mexican Americans, and Other Latinos in the New Hampshire REACH 2010 Initiative: The Added Dimension of Immigration. *Am J Public Health*, 96(10), 1821-1828.
- Geronimus, A. T. (1992). The weathering hypothesis and the health of African-American women and infants. *Ethnicity and Disease*, 2, 207-221.
- Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2006). Income Is Not Enough: Incorporating Material Hardship Into Models of Income Associations With Parenting and Child Development. *Child development*, 78(1), 70-95. doi:[10.1111/j.1467-8624.2007.00986.x](https://doi.org/10.1111/j.1467-8624.2007.00986.x)
- Gil-Rivas, V., Greenberger, E., Chen, C., & Lopez-Lena, M. M. (2003). Understanding depressed mood in the context of a family-oriented culture. *Adolescence*, 38, 93-109.
- Golding, J. M., & Burnam, M. A. (1990). Immigration, stress, and depressive symptoms in a Mexican-American community. *The Journal of nervous and mental disease*, 178(3), 161.
- Gonzales, N.A., Deardorff, J., Formoso, D., Barr, A., & Barrera, M. (2006). Family mediators of the relation between acculturation and adolescent mental health. *Family Relations*, 55, 318-330.
- Gonzales, N. A., Pitts, S. C., Hill, N. E., & Roosa, M. W. (2000). A mediational model of the

- impact of interparental conflict on child adjustment in a multiethnic, low-income sample. *Journal of Family Psychology*, 14(3), 365–379.
- Gonzalez, H. M., Vega, W. A., Williams, D. R., Tarraf, W., West, B. T., & Neighbors, H. W. (2010). Depression care in the United States: Too little for too few. *Archives of General Psychiatry*, 67(1), 37.
- Gonzalez Burchard, E., Borrell, L.N., Choudhry, S., Naqvi, M., Tsai, H., Rodriguez-Santana, J.R., ...Risch, N. (2007). Latino populations: A unique opportunity for the study of race, genetics, and social environment in epidemiological research. *American Journal of Public Health*, 95, (12), 2161-2168.
- Goodman, S. H., Adamson, L. B., Riniti, J., & Cole, S. (1994). Mothers' expressed attitudes: Associations with maternal depression and children's self-esteem and psychopathology. *Journal of Amer Academy of Child & Adolescent Psychiatry*, 33(9), 1265.
- Goodman, L. A., Smyth, K. F., & Banyard, V. (2010). Beyond the 50-Minute Hour: Increasing Control, Choice, and Connections in the Lives of Low-Income Women. *American Journal of Orthopsychiatry*, 80(1), 3–11.
- Goosby, B. J. (2007). Poverty Duration, Maternal Psychological Resources, and Adolescent Socioemotional Outcomes. *Journal of Family Issues*, 28(8), 1113-1134.
- Grote, N. K., Bledsoe, S. E., Wellman, J., & Brown, C. (2007). Depression in African American and White women with low incomes: The role of chronic stress. *Social Work in Public Health*, 23(2), 59–88.
- Guest, A.M., Cover, J.k., Matsueda, R.L., & Kubrin, C.E. (2006). Neighborhood context and neighboring ties. *City & Community*, 5(4), 363-385.
- Halgunseth, L. C., Ispa, J. M., & Rudy, D. (2006). Parental control in Latino families: An integrated review of the literature. *Child Development*, 77(5), 1282–1297.
- Hankin, B. L., & Abramson, L. Y. (1999). Development of gender differences in depression: Description and possible explanations. *Annals of Medicine*, 31(6), 372–379.
- Harrison, A. O., Wilson, M. N., Pine, C. J., Chan, S. Q., & Buriel, R. (1990). Family ecologies of ethnic minority children. *Child Development*, 61, 347-362.
- Hashima, P. Y., & Amato, P. R. (1994). Poverty, social support, and parental behavior. *Child Development*, 65(2), 394–403.
- Heilemann, M. V., Coffey-Love, M., & Frutos, L. (2004). Perceived reasons for depression among low income women of Mexican descent. *Archives of Psychiatric Nursing*, 18(5), 185-192. doi:[10.1016/j.apnu.2004.07.006](https://doi.org/10.1016/j.apnu.2004.07.006)
- Heilemann, M. S., Lee, K. A., & Kury, F. S. (2002). Strengths and vulnerabilities of women of Mexican descent in relation to depressive symptoms. *Nursing Research*, 51(3), 175.
- Henderson C, Diez Roux AV, Jacobs DR Jr, Kiefe, C. West, D. & Williams, D. (2005). Neighborhood characteristics, individual level socioeconomic factors, and depressive symptoms in young adults: The CARDIA Study. *J Epidemiol Community Health*, 59:322-328
- Hernandez, D. (2006). *Young Hispanic children in the U.S.: A demographic portrait based on Census 2000*. Tempe, AZ.: National Task Force on Early Childhood Education for Hispanics.
- Hernandez, M., & McGoldrick, M. (1999). Migration and the family cycle. In B. Carter & M. McGoldrick (Eds.), *The expanded family cycle* (pp.169-184). Boston: Allyn & Bacon.
- Hill, N. E., Bromell, L., Tyson, D. F., & Flint, R. (2007). Developmental Commentary:



- Ecological Perspectives on Parental Influences During Adolescence. *Journal of Clinical Child & Adolescent Psychology*, 36(3), 367. doi:[10.1080/15374410701444322](https://doi.org/10.1080/15374410701444322)
- Hill, N. E., Bush, K. R., & Roosa, M. W. (2003). Parenting and Family Socialization Strategies and Children's Mental Health: Low-Income Mexican-American and Euro-American Mothers and Children. *Child Development*, 74(1), 189-204.
- Hill, N. E., & Herman-Stahl, M. A. (2002). Neighborhood safety and social involvement: associations with parenting behaviors and depressive symptoms among African American and Euro-American mothers. *Journal of Family Psychology: JFP: Journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 16(2), 209-219.
- Hill, T.D., Ross, C.E., & Angel, R.J. (2005). Neighborhood disorder, psychological distress, and health. *Journal of Health and Social Behavior*, 46, 170–186.
- Hinshaw, S. P., Han, S. S., Erhardt, D., & Huber, A. (1992). Internalizing and externalizing behavior problems in preschool children: Correspondence among parent and teacher ratings and behavior observations. *Journal of Clinical Child Psychology*, 21, 143–150.
- Hoff-Ginsberg, E., & Tardif, T. (1995). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (pp. 161–188). Mahwah, NJ: Erlbaum.
- House, J. S., Lepkowski, J. M., Kinney, A. M., Mero, R. P., Kessler, R. C., & Herzog, A. R. (1994). The social stratification of aging and health. *Journal of Health and Social Behavior*, 213–234.
- Hovey, J. D. (2000). Acculturative stress, depression, and suicidal ideation in Mexican immigrants. *Cultural Diversity and Ethnic Minority Psychology*, 6(2), 134–151.
- Hovey, J. D., & King, C. A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of Amer Academy of Child & Adolescent Psychiatry*, 35(9), 1183.
- Hu, L., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424 – 453.
- Hunt, L. M., Schneider, S., & Comer, B. (2004). Should" acculturation" be a variable in health research? a critical review of research on US Hispanics. *Social Science and Medicine*, 59(5), 973–986.
- Huston, A.C., McLoyd, V.C. , & Garcia Coll, C. (1994). Children and poverty: Issues in contemporary research. *Child Development*, Vol. 65: 275-282.
- Ispa, J. M., Fine, M. A., Halgunseth, L. C., Harper, S., Robinson, J., Boyce, L.,...Brady-Smith, C. (2004). Maternal intrusiveness, maternal warmth, and mother-toddler relationship outcomes: Variations across low-income ethnic and language groups. *Child Development*, 75, 1613–1631.
- Izzo, C., Weiss, L., Shanahan, T., & Rodriguez-Brown, F. (2000). Parental self-efficacy and social support as predictors of parenting practices and children's socioemotional adjustment in Mexican immigrant families. *Journal of Prevention & Intervention in the Community*, 20(1), 197–213.
- Jackson, A. P., J. Brooks-Gunn, C.-C. Huang, and M. Glassman. 2000. Single mothers in low-wage jobs: Financial strain, parenting, and preschoolers' outcomes. *Child Development* 71 (5): 1409–23.
- James, S. A. (1993). Racial and ethnic differences in infant mortality and low birth weight. *Annals of Epidemiology*, 3(2), 130–136.

- Jasso, G., D.S. Massey, M.R. Rosenzweig, and J.P. Smith. 2004. Immigrant health - Selectivity and acculturation. Unpublished Manuscript. RAND. Available online at <http://econwpa.wustl.edu/eps/lab/papers/0412/0412002.pdf>
- Jargowsky, P.A. (2006). Immigrants and neighborhoods of concentrated poverty: Assimilation or Stagnation? *Journal of Ethnic and Migration Studies*, 35(7), 1129- 1151.
- Kaestner, R., Pearson, J.A., Keene, D., & Geronimus, A.T. (2009). Stress, allostatic load, and health of Mexican immigrants. *Social Science Quarterly*, 90, 5, 1089-1110.
- Keith, V.M., Lincoln, K.D., Taylor, R.J., Jackson, J.S. (2010) Discriminatory Experiences and Depressive Symptoms among African American Women: Do Skin Tone and Mastery Matter? *Sex Roles*. Vol 62(1-2):48-59
- Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, 40(3), 208–230.
- Klein, K., & Forehand, R. (2000). Family processes as resources for African American children exposed to a constellation of sociodemographic risk factors. *Journal of Clinical Child Psychology*, 29, 53-65.
- Klebanov, P. K., Brooks-Gunn, J., & Duncan, G. J. (1994). Does neighborhood and family poverty affect mothers' parenting, mental health, and social support? *Journal of Marriage and the Family*, 56, 441-455
- Kline, R.B.(2005). *Principles and Practice of Structural Equation Modeling*. New York: Guilford Press.
- Knight, G. P., Virdin, L. M., & Roosa, M. (1994). Socialization and Family Correlates of Mental Health Outcomes among Hispanic and Anglo American Children: Consideration of Cross-Ethnic Scalar Equivalence. *Child Development*, 65(1), 212-224.
- Krieger, N. (1999). Embodying inequality: A review of concepts, measures, and methods for studying health consequences of discrimination. *International Journal of Health Services*, 29, 295–352.
- Krishnakumar, A., & Buehler, C. (2000). Interparental Conflict and Parenting Behaviors: A Meta-Analytic Review. *Family Relations*, 49(1), 25-44.
- Landrine, H., Klonoff, E.A., 1996. The Schedule of Racist Events: a measure of discrimination and a study of its negative physical and mental health consequences. *J. Black Psychol.* 22, 144–168.
- Lansford, J. E., Deater-Deckard, K., Dodge, K. A., Bates, J.E., & Pettit, G. S. (2004). Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *Journal of Child Psychology and Psychiatry*, 45, 801 – 812.
- Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence upon child and adolescent outcomes. *Psychological Bulletin*, 126, 309-337.
- Leidy, M. S., Parke, R. D., Cladis, M., Coltrane, S., & Duffy, S. (2009). Positive Marital Quality, Acculturative Stress, and Child Outcomes Among Mexican Americans. *Journal of Marriage and Family*, 71(4), 833-847. doi:[10.1111/j.1741-3737.2009.00638.x](https://doi.org/10.1111/j.1741-3737.2009.00638.x)
- Lee, C.Y., Anderson, J.R., Horowitz, J.L., & August, G.J. (2009). Family income and parentingL The role of parental depression and social support. *Journal of Family Relations*, 58, 417-430.
- Lewinsohn, P.M., Gotlib, I. H., Lewinsohn, M., Seeley, J. R., & Allen, N. B. (1998). Gender

- differences in anxiety disorders and anxiety symptoms in adolescents. *Journal of Abnormal Psychology*, 107,109-117
- Liao, Y., Cooper, R.S., Cao, G., Durazo-Arvizu, R., Kaufman, J.S., Luke, A., & McGee, D.L. (1998). Mortality patterns among adult Hispanics: Findings from the NHIS, 1986 to 1990. *American Journal of Public Health*,88,(2), 227-232.
- Lincoln, K. D. (2000). Social support, negative social interactions, and psychological well-being. *Social Service Review*, 74(2), 231–252.
- Little, T.D. (June, 2010). *Model Fit and Model Comparison*. Lecture presented at the 8<sup>th</sup> annual summer institutes on advanced quantitative analysis. Center for Research Methods and Data Analysis, University of Kansas.
- Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: a meta-analysis. *American Journal of Epidemiology*, 157(2), 98.
- Loukas, A., Prelow, H. M., Suizzo, M., & Allua, S. (2008). Mothering and Peer Associations Mediate Cumulative Risk Effects for Latino Youth. *Journal of Marriage and Family*, 70(1), 76-85.
- Love, J. A., & Buriel, R. (2007). Language brokering, autonomy, parent-child bonding, biculturalism, and depression: A study of Mexican American adolescents from immigrant families. *Hispanic Journal of Behavioral Sciences*, 29(4), 472.
- Luis, T. M., Varela, R. E., & Moore, K. W. (2008). Parenting practices and childhood anxiety reporting in Mexican, Mexican American, and European American families. *Journal of Anxiety Disorders*, 22(6), 1011-1020.
- MacPhee, D., Fritz, J., & Miller-Heyl, J. (1996). Ethnic variations in personal social networks and parenting. *Child Development*, 67(6), 3278–3295.
- Mair, C.,DiezRoux,A.V.,Morenoff,J.D., (2010). Neighborhood stressors and social support as predictors of depressive symptoms in the Chicago community adult health study. *Health & Place*,16,811–819.
- Manongdo, J. A., & Garcia, J. I. (2007). Mothers Parenting Dimensions and Adolescent Externalizing and Internalizing Behaviors in a Low-Income, Urban Mexican American Sample. *Journal of Clinical Child & Adolescent Psychology*, 36(4), 593–604.
- Marin, G., & Marin, B.V. (1991). *Research with Hispanic Populations*. Newbury Park, CA: Sage Publications.
- Markides, K.S. & Coreil,J. (1986). The health of Hispanics in the Southwestern United States: An epidemiologic paradox. *Public Health Reports*, 101, 253-265.
- Marmot, M.G., Adelstein, A.M., & Bulusu, L. (1984). Lessons from the study of immigrant mortality. *Lancet* 30:1455–57.
- Martin, K. R., & Schoua-Glusberg, A. (2002). *Project on Human Development in Chicago Neighborhoods Longitudinal Cohort Study: Field data collection report*. Cambridge, MA: Harvard University.
- Martinez, R. (2002). *Latino Homicide: Immigration, Violence and Community*. NewYork: Routledge.
- Martinez, R. & Lee, M.T. (2000). On immigration and crime. *Criminal Justice*, 1, 485-524.
- Massey, D.S. (1996). The age of extremes: Concentrated affluence and poverty in the 21<sup>st</sup> century. *Demography*, 33, 395-412.
- Massey, D.S. & Denton, N.A . (1993). *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.

- Massey, D.S. & Fischer, M.J.(2000).How segregation concentrates poverty. *Ethnic and Racial Studies*, 23: 4,670-691.
- Massey DS, Gross AH, Eggers ML. Segregation, the concentration of poverty, and the life chances of individuals. (1991). *Social Science Research*. 20:397–420.
- McFarlane AH, Bellissimo A, Norman GR. (1995).Family structure, family functioning and adolescent well-being: The transcendent influence of parental style. *Journal of Child Psychology & Psychiatry*, 36:847–864.
- McLeod, J. D., & Shanahan, M. J. (1993). Poverty, parenting, and children's mental health. *American Sociological Review*, 58(3), 351–366.
- McLeod, J. D., Kruttschnitt, C., & Dornfeld, M. (1994). Does parenting explain the effects of structural conditions on children's antisocial behavior? A comparison of Blacks and Whites. *Social Forces*, 73, 575–604.
- McLeod, J. D., & Nonnemaker, J. M. (2000). Poverty and Child Emotional and Behavioral Problems: Racial/Ethnic Differences in Processes and Effects. *Journal of Health and Social Behavior*, 41(2), 137-161.
- McLoyd, V. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*, 61, 311–346.
- McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, 53, 185–204.
- McLoyd, V. C., Jayaratne, T., Ceballo, R., & Borquez, J. (1994). Unemployment and work interruption among African American single mothers: Effects on parenting and adolescent socioemotional functioning. *Child Development*, 65, 562–589.
- McCloskey L.A., Figueredo, A.J., Koss, M.P. (1995). The effects of systemic family violence on children's mental health. *Child Development*, 66:1239–1261.
- Meyer, I. H., Schwartz, S., & Frost, D. M. (2008). Social patterning of stress and coping: Does disadvantaged status confer more stress and fewer coping resources? *Social Science and Medicine*, 67, 368–379.
- Mickelson, K. D., & Kubzansky, L. D. (2003). Social distribution of social support: the mediating role of life events. *American Journal of Community Psychology*, 32(3), 265–281.
- Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development*, 56, 289–302.
- Miranda, A. O., Estrada, D., & Firpo-Jimenez, M. (2000). Differences in family cohesion, adaptability, and environment among Latino families in dissimilar stages of acculturation. *Family Journal: Counseling and Therapy for Couples and Families*, 8(4), 341-350.
- Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development*, 73(3), 935–951.
- Moos, R. H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: Resolving the case of the Family Environment Scale. *Family Processes*, 29, 199-208.
- Moradi, B. & Risco, C. (2006). Perceived discrimination experiences and mental health of Latina/o American persons. *Journal of Counseling Psychology*, 53, 411-421.
- Mościcki, E. K., Locke, B. Z., Rae, D. S., & Boyd, J. H. (1989). Depressive symptoms among



- Mexican Americans: the Hispanic Health and Nutrition Examination Survey. *American Journal of Epidemiology*, 130(2), 348-360.
- Muris, P., Meesters, C., & van den Berg, F. (2003). Internalizing and externalizing problems as correlates of self-reported attachment style and perceived parental rearing in normal adolescents. *Journal of Child and Family Studies*, 12, 2 171-183.
- Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health*, 93(2), 232.
- O'Donnell, E. H., Moreau, M., Cardemil, E. V., & Pollastri, A. (2010). Interparental Conflict, Parenting, and Childhood Depression in a Diverse Urban Population: The Role of General Cognitive Style. *Journal of youth and adolescence*, 39(1), 12-22.
- Ortega, A. N., Rosenheck, R., Alegria, M., & Desai, R. A. (2000). Acculturation and lifetime risk of psychiatric and substance use disorders among Hispanics. *Journal of Nervous and Mental Disease*, 188, 728-735.
- Pablos-Mendez, A. (1994). Mortality among Hispanics. *JAMA*, 271(16), 1237-238.  
doi:[10.1001/jama.1994.03510400023017](https://doi.org/10.1001/jama.1994.03510400023017)
- Palloni, A., & Arias, E. (2004). Paradox lost: explaining the Hispanic adult mortality advantage. *Demography*, 41(3), 385-415.
- Palloni, A., & Morenoff, J. D. (2001). Interpreting the paradoxical in the Hispanic paradox: Demographic and epidemiologic approaches. *Annals of the New York Academy of Sciences*, 954, 140-174.
- Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., et al. (2004). Economic Stress, Parenting, and Child Adjustment in Mexican American and European American Families. *Child Development*, 75(6), 1632-1656.
- Parker, J., & Asher, S. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, 102, 357-389.
- Pasch, L. A., Deardorff, J., Tschann, J. M., Flores, E., Penilla, C., & Pantoja, P. (2006). Acculturation, Parent-Adolescent Conflict, and Adolescent Adjustment in Mexican American Families. *Family Process*, 45(1), 75-86. doi:[10.1111/j.1545-5300.2006.00081.x](https://doi.org/10.1111/j.1545-5300.2006.00081.x)
- Pérez, D. J., Fortuna, L., & Alegría, M. (2008). Prevalence and correlates of everyday discrimination among US Latinos. *Journal of community psychology*, 36(4), 421.
- Perkins, D.D. & Taylor, R.B. (1996). Ecological assessments of community disorder: their relationship to fear of crime and theoretical implications, *Am. J. Commun. Psychol.* 24, pp. 63-107.
- Pew Hispanic Center. (2011). *The Mexican-American boom: Births overtake immigration*. Washington, DC: Pew Hispanic Center, July. Retrieved from Pew Hispanic Center website: <http://pewhispanic.org/files/reports/144.pdf>
- Portes, A., Fernandez-Kelly, P., & Haller, W. (2005). Segmented assimilation on the ground: The new second generation in early adulthood. *Ethnic and Racial Studies*, 28, 1000-1040.
- Portes, A., & Rumbaut, R. G. (2006). *Immigrant America: A portrait*. Berkeley: University of California Press.
- Prellow, H., Loukas, A., & Jordan-Green, L. (2007). Socioenvironmental Risk and Adjustment in Latino Youth: The Mediating Effects of Family Processes and Social Competence. *Journal of Youth and Adolescence*, 36(4), 465-476.
- Ramirez, J. R., Crano, W. D., Quist, R., Burgoon, M., Alvaro, E.M., & Grandpre, J. (2004).

- Acculturation, familism, parental monitoring, and knowledge as predictors of marijuana and in halant use in adolescents. *Psychology of Addictive Behaviors*, 18, 3–11.
- Reid, L. W., Weiss, H. E., Adelman, R. M., & Jaret, C. (2005). The immigration-crime relationship: Evidence across US metropolitan areas. *Social Science Research*, 34, 757–780.
- Riley, D., & Eckenrode, J. (1986). Social ties: Subgroup differences in costs and benefits. *Journal of Personality and Social Psychology*, 51(4), 770–778.
- Rivera, F. I., Guarnaccia, P. J., Mulvaney-Day, N., Lin, J. Y., Torres, M., & Alegria, M. (2008). Family Cohesion and its Relationship to Psychological Distress among Latino Groups. *Hispanic Journal of Behavioral Sciences*, 30(3), 357–378.  
doi:[10.1177/0739986308318713](https://doi.org/10.1177/0739986308318713)
- Robertson, E. B., Elder Jr, G. H., Skinner, M. L., & Conger, R. D. (1991). The costs and benefits of social support in families. *Journal of Marriage and the Family*, 53(2), 403–416.
- Robila, M., & Krishnakumar, A. (2006). Economic Pressure and Children's Psychological Functioning. *Journal of Child and Family Studies*, 15(4), 433–441. doi:[10.1007/s10826-006-9053-x](https://doi.org/10.1007/s10826-006-9053-x)
- Roche, K. M., Ensminger, M. E., & Cherlin, A. J. (2007). Variations in parenting and adolescent outcomes among African American and Latino families living in low-income, urban areas. *Journal of Family Issues*, 28(7), 882–909.
- Rodriguez, N., Mira, C., Paez, N., & Myers, H. (2007). Exploring the Complexities of Familism and Acculturation: Central Constructs for People of Mexican Origin. *American Journal of Community Psychology*, 39(1), 61–77. doi:[10.1007/s10464-007-9090-7](https://doi.org/10.1007/s10464-007-9090-7)
- Roosa, M. W., Morgan-Lopez, A. A., Cree, W., & Spector, M. (2002). Ethnic culture, poverty, and context: Sources of influence on Latino families and children. In J. Contreras, A. Neal-Barnett, & K. Kerns (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 27–44). Westport, CT: Praeger.
- Ross, C. (2000). Neighborhood disadvantage and adult depression. *Journal of Health and Social Behavior*, 41:177–87.
- Ross, C.E. & Jang, S.J. (2000). Neighborhood disorder, fear, and mistrust: the buffering role of social ties with neighbors. *Am. J. Commun. Psychol.* 28, pp. 401–420.
- Ross, C. E. & Mirowsky, J. (2001). Neighborhood Disadvantage, Disorder, and Health. *Journal of Health and Social Behavior*, 42, 258–276.
- Rubin, K. H., & Mills, R. S. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. *Canadian Journal of Behavioural Science*, 23, 300–317.
- Rudolph, K. D., Flynn, M., Abaied, J. L., Groot, A., & Thompson, R. (2009). Why is Past Depression the Best Predictor of Future Depression? Stress Generation as a Mechanism of Depression Continuity in Girls. *Journal of Clinical Child & Adolescent Psychology*, 38(4), 473. doi:[10.1080/15374410902976296](https://doi.org/10.1080/15374410902976296)
- Rudy, D., & Grusec, J. E. (2001). Correlates of authoritarian parenting in individualist and collectivist cultures and implications for understanding the transmission of values. *Journal of Cross-Cultural Psychology*, 32, 202–212.
- Rudy, D., & Grusec, J.E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem. *Journal of Family Psychology*, 20(1), 68–78.
- Sabogal, F., Marin, G., Otero-Sabogal, R., Marin, B.V., & Perez-Stable, E.J. (1987). Hispanic

- familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences*, 9, 397-412.
- Samaniego, R. Y., & Gonzales, N.A. (1999). Multiple mediators of the effects of acculturation status on delinquency for Mexican American adolescents. *American Journal of Community Psychology*, 27, 189-210.
- Sampson, R. (2008). Rethinking crime and immigration: Understanding people and their social worlds. *Contexts*, (7), 28-33.
- Sampson, R.J., Morenoff, J.D. and Raudenbush, S.W. (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, 95: 224-232
- Sampson, R., Raudenbush, S.W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277, 918-924.
- Satorra, A. & Bentler, P. (1999). A scaled difference chi-square test statistic for moment structure analysis. Retrieved from <http://preprints.stat.ucla.edu/260/A%20Scaled%20Difference%20Chi-square%20Test%20Statistic%20for%20Moment%20Structure%20Analysis.pdf>
- Scaramella, L., Conger, R., & Simons, R. (1999). Parental protective influences and gender specific increases in adolescent internalizing and externalizing problems. *Journal of Research on Adolescence*, 9, 111-141.
- Schafer, J. L., & Graham, J.W. (2002). Missing data: our view of the state of the art. *Psychological Methods* 7:147-177.
- Schaffer, D. M., & Wagner, R. M. (1996). Mexican American and Anglo single mothers: The influence of ethnicity, generation, and socioeconomic status on social support networks. *Hispanic Journal of Behavioral Sciences*, 18(1), 74.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health psychology*, 4(3), 219-247.
- Schieman, S. (2005). Residential stability and the social impact of neighborhood disadvantage: Gender and race contingent patterns. *Social Forces*, 83, 89-122.
- Schieman, S. (2009). Residential stability, neighborhood racial composition, and the subjective assessment of neighborhood problems among older adults. *The Sociological Quarterly*, 50 (4), 608-632.
- Schulz, A. J., Israel, B. A., Zenk, S. N., Parker, E. A., Lichtenstein, R., Shellman-Weir, S., & AB, L. K. (2006). Psychosocial stress and social support as mediators of relationships between income, length of residence and depressive symptoms among African American women on Detroit's eastside. *Social Science & Medicine*, 62(2), 510-522.
- Schulz, A., Williams, D., Israel, B., Becker, A., Parker, E., James, S. A., & Jackson, J. (2000). Unfair treatment, neighborhood effects, and mental health in the Detroit metropolitan area. *Journal of Health and Social Behavior*, 41(3), 314-332.
- Sciarra, D. T., & Ponterotto, J. G. (1991). Counseling the Hispanic bilingual family: Challenges to the therapeutic process. *Psychotherapy*, 28, 473-479.
- Scribner, R. (1996). Paradox as paradigm—the health outcomes of Mexican Americans. *American Journal of Public Health*, 86(3), 303.
- Shaw, D.S. & Emery, R.E. (1988). Chronic family adversity and school-age children's adjustment. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27(2):200-206
- Shaw, C.R. & McKay, H.D. (1969). *Juvenile Delinquency and Urban Areas*. Chicago: The University of Chicago Press

- Sheldon, T. A., & Parker, H. (1992). Race and ethnicity in health research. *Journal of Public Health Medicine*, 14(2), 104–110.
- Simons, R. L., Lin, K., Gordon, L. C., Brody, G. H., Murry, V., & Conger, R. D. (2002). Community Differences in the Association Between Parenting Practices and Child Conduct Problems. *Journal of Marriage and Family*, 64(2), 331–345.
- Singh, G.K. & Yu, S.M.(1996). Adverse pregnancy outcomes: Differences between US- and foreign-born women in Major US racial and ethnic groups. *American Journal of Public Health* 86(6):837-843.
- Smokowski, P.R. & Bacallao, M.L. (2006). Acculturation and Aggression in Latino Adolescents: A Structural Model Focusing on Cultural Risk Factors and Assets. *Journal of Abnormal Child Psychology*, 34(5), 657–671.
- Sorlie, P.D., Backlund, E., Johnson, N.J. & Rogot, E. (1993). Mortality by Hispanic status in the United States. *Journal of the American Medical Association* 270,(20):2464-68.
- Steele, R. G., Little, T. D., Ilardi, S. S., Forehand, R., Brody, G. H., & Hunter, H. L. (2006). A Confirmatory Comparison of the Factor Structure of the Children's Depression Inventory between European American and African American Youth. *Journal of Child and Family Studies*, 15(6), 773–788.
- Suárez-Orozco, C. & Suárez-Orozco, M. (2001). *Children of Immigration*. Cambridge, MA: Harvard University Press.
- Szapocznik, J., Kurtines, W.M., & Fernandez, T. (1980). Biculturalism and adjustment among Hispanic youths. *International Journal of Intercultural Relations*, 4, 353–375.
- Szapocznik, J., & Truss, C. (1978). Intergeneration sources of conflict in Cuban mothers. In M. Montiel, (Ed.). *Hispanic Families*. Washington, DC: Coalition of Spanish Speaking Mental Health Organizations.
- Szapocznik J, & Williams RA. (2000). Brief Strategic Family Therapy: Twenty-five years of interplay among theory, research and practice in adolescent behavior problems and drug abuse. *Clinical Child & Family Psychology Review*, 3 (2): 117-134.
- Tannenbaum, L. E., Forehand, R., & McCombs-Thomas, A. (1992). Adolescent self-reported anxiety and depression: Separate constructs or a single entity. *Child Study Journal*, 22, 61–72.
- Telles, E.E. & Ortiz, V. (2008). *Generations of Exclusion: Mexican Americans, Assimilation, and Race*. New York: Russell Sage Foundation.
- Tschann, J. M., Flores, E., Marin, B. V., Pasch, L. A., Baisch, E. M., & Wibbelsman, C. J. (2002). Interparental conflict and risk behaviors among Mexican American adolescents: A cognitive-emotional model. *Journal of Abnormal Child Psychology*, 30(4), 373–385.
- Turner, R. J., & Lloyd, D. A. (1999). The stress process and the social distribution of depression. *Journal of Health and Social Behavior*, 374–404.
- Turney, K., & Harknett. K. (2010). Neighborhood disadvantage, residential stability, and perceptions of instrumental support among new mothers. *Journal of Family Issues*, 31, 499–524.
- Turner, R. & Marino, F. (1994). Social support and social structure: A descriptive epidemiology, *Journal of Health and Social Behavior* 35, pp. 193–212.
- U.S. Surgeon General (1999). *Mental Health Report of the Surgeon General*. U.S. Department of Health and Human Services, Rockville, MD.
- Varela, R. E., Steele, R. G., & Benson, E. R. (2007). The contribution of ethnic minority status to adaptive style: A comparison of Mexican, Mexican American, and European American

- children. *Journal of Cross-Cultural Psychology*, 38(1), 26.
- Varela, R. E., Vernberg, E. M., Sanchez-Sosa, J. J., Riveros, A., Mitchell, M., & Mashunkashey, J. (2004). Parenting style of Mexican, Mexican American, and Caucasian-non-Hispanic families: Social context and cultural influences. *Journal of Family Psychology*, 18(4), 651.
- Vega, W. (1990). Trends in Hispanic family research: A decade review. *Journal of Marriage and the Family*, 52, 1015-1024.
- Vega, W. A. & Amaro, H. (1994). Latino outlook: Good health, uncertain prognosis. *Annual Review of Public Health*, 15: 39-67.
- Vega, W.A., Kolody, B., Aguilar-Gaxiola, S., Alderete, W., Catalano, R., Caraveo-Anduaga, J. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Archives of General Psychiatry*, 55, 771-778.
- Velez, C., & Ungemack, J. (1995). Psychosocial correlates of drug use among Puerto Rican youth: Generational status differences. *Social Science and Medicine*, 40, 91-103.
- Viruell-Fuentes, E. A. (2007). Beyond acculturation: Immigration, discrimination, and health research among Mexicans in the United States. *Social Science & Medicine*, 65(7), 1524-1535. doi:[10.1016/j.socscimed.2007.05.010](https://doi.org/10.1016/j.socscimed.2007.05.010)
- Voydanoff, P. (1990). Economic distress and family relations: A review of the eighties. *Journal of Marriage and the Family*, 52(4), 1099–1115.
- Warr, P., Jackson, P., & Banks, M. (1988). Unemployment and mental health: Some British studies. *Journal of Social Issues*, 44, 47-68.
- Warner, B.D. & Rountree, P.M. (1997). Local social ties in a community and crime model: Questioning the systemic nature of informal social control. *Social Problems*, 44(4), 520-536.
- Wei, M., Valdez, R. A., Mitchell, B. D., Haffner, S. M., Stern, M.P., & Hazuda, H. (1996). Migration status, socio-economic status, and mortality rates in Mexican Americans and non-Hispanic whites: The San Antonio Heart Study. *Annals of Epidemiology*, 6, 307-313.
- Wen, M., Browning, C. R., & Cagney, K. A. (2003). Poverty, affluence and income inequality: neighborhood economic structure and its implications for self-rated health. *Social Science & Medicine*, 57, 843–860.
- Wight, V.R., Chau, M., & Aratani, Y. (2010). Who are America's poor children? The official story. (Issue Brief, January 2010). Retrieved from National Center for Children In Poverty website: [http://www.nccp.org/publications/pub\\_912.html](http://www.nccp.org/publications/pub_912.html)
- Williams, D. R. (1999). Race, socioeconomic status, and health the added effects of racism and discrimination. *Annals of the New York Academy of Sciences*, 896, 173–188.
- Williams, D.R., Mohammed, S.A., 2009. Discrimination and racial disparities in health: evidence and needed research. *J. Behav. Med.* 32, 20–47.
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2008). Racial/ethnic discrimination and health: findings from community studies. *American Journal of Public Health*, 98(Supplement 1), S29.
- Williams, D. R., & others. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, 2(3), 335.
- Wilson, W.J. (1987). *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago, IL: University of Chicago Press.
- Woodward, L.J., & Fergusson, D.M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *J Am Acad Child Adolesc Psychiatry* 40:1086–1093.

- Yen, I. H., & Kaplan, G. A. (1999). Poverty area residence and changes in depression and perceived health status: evidence from the Alameda County Study. *International Journal of Epidemiology*, 28(1), 90–94.
- Zambrana, R.E. & Carter-Pokras (2010). Acculturation Research in Advancing Science and Practice in Reducing Health Care Disparities among Latina/os. *American Journal of Public Health*, 100(1):18-23.
- Zambrana, R. E., Silva-Palacios, V., & Powell, D. (1992). Parenting concerns, family support systems, and life problems in Mexican-origin women: A comparison by nativity. *Journal of Community Psychology*, 20(4), 276–288.